CHAPTER 11 COMPLIANCE

This chapter addresses the EPA's responses to public comments on compliance in the EPA's Proposed *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources*.

Commenters also raised issues on topics that are not covered by this chapter. Please refer to the following chapters for responses specific to those issues:

- **Chapter 1**: Source Category
- **Chapter 2**: Regulation of Methane
- **Chapter 3**: Well Completions
- **Chapter 4**: Fugitives Monitoring
- **Chapter 5**: Pumps
- **Chapter 6**: Controllers
- **Chapter 7**: Compressors
- **Chapter 8**: Equipment Leaks at Natural Gas Processing Plants
- **Chapter 9**: Liquids Unloading
- **Chapter 10**: Storage Vessels
- **Chapter 12**: Regulatory Impact Analysis
- **Chapter 13**: Existing State, Local, and Federal Rules
- **Chapter 14**: Subpart OOOO
- **Chapter 15**: Miscellaneous
- **Chapter 16**: Comment Period Extension

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11.0 Compliance

Commenter Name: Jessica Bassett, Director of Regulatory Projects, Environmental Law Project
Commenter Affiliation: University of Pennsylvania Law School
Document Control Number: EPA-HQ-OAR-2010-0505-6247
Comment Excerpt Number: 2

Comment: Next Generation Compliance and Rule Effectiveness

Next Generation Compliance (NextGen) is EPA's initiative to increase regulatory compliance and rule effectiveness by incorporating several key elements into its rulemaking and enforcement procedures. NextGen centers on five core components, including: (i) improved design of regulations and permits; (ii) advanced monitoring techniques; (iii) increased use of electronic reporting; (iv) greater transparency; and (v) applying innovative enforcement techniques.

The goal of NextGen is to increase regulatory compliance by shifting away from a boots-on-the-ground approach, which requires heavy resource investment, and moving towards innovative monitoring solutions more in-line with the modern-day prevalence of technology. It is in essence an attempt at "smarter" regulation. Each of the five key aspects of Next Gen is designed to further this goal.

Designing more effective regulations and permits with greater clarity will create regulations that are both easier to implement and easier for regulated parties to follow.

Advanced monitoring techniques, such as special sensors to detect pollution or gas leaks, will further decrease EPA's resource burden and increase compliance with environmental laws and regulations by monitoring more potential pollution sources without needing to dispatch large numbers of inspectors.

Further, increased employment of electronic reporting will vastly improve EPA's ability to collect and analyze required reporting data to determine where compliance is taking place and where it is not.

Greater transparency of compliance data also increases public accountability. For instance, posting emissions data on company websites provides greater opportunity for citizens to identify instances of noncompliance.

Finally, enforcement techniques that utilize innovative technology to collect and analyze data would allow EPA to track compliance across a broader spectrum of entities.

EPA has incorporated several elements of NextGen into its proposed rule. This is a wise decision given that NextGen tools can only become a reality if they are included in the substantive regulations EPA promulgates and enforces. NextGen must be incorporated into rulemakings, such as this proposed rule for emission standards for new and modified sources, to bind regulated entities to comply with its objectives.

NextGen has been met with mixed responses, particularly among the regulated community that fears NextGen measures may: (i) compromise their privacy rights; or (ii) increase costs through additional legal claims by members of the public or the government. Still others have observed that NextGen may promise greater compliance enhancements than it will actually deliver, arguing that it is too vague to be effective. They further state that NextGen's efforts are not truly innovative and will still require EPA to employ all of its traditional, resource-intensive enforcement tools. Certain non-profit organizations have also expressed their concerns that NextGen is not an effective replacement for traditional enforcement measures.

With the realities of an increasingly advanced and large regulated community, however, some have noted NextGen's capacity to adapt regulatory enforcement to meet the constraints on the EPA.

We believe that NextGen is a good policy to supplement traditional enforcement strategies, particularly given the realities of pollution and environmental compliance being so highly technical and diffuse and therefore difficult to monitor.

Response: Comment is a supportive comment to which no response is required.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 14

Comment: Compliance Assurance Requirements for Subpart OOOOa Are Overly Burdensome

Issue – The monitoring and testing requirements are overly burdensome for Subpart OOOOa. The remote, dispersed and unmanned nature of facilities that lack electrical power, make the requirements logistically impractical, technically difficult and uneconomic. The use of NESHAP HH major source-type compliance requirements for storage vessels is confusing and unjustifiably stringent for NSPS.

Recommendation – CPMS requirements for monitoring centrifugal compressors and pneumatic controllers should be eliminated in lieu of the sensory inspections required for storage vessels. Additionally, the performance testing requirements should be revised.

Response: The EPA received several comments stating that the proposed monitoring and testing requirements are overly burdensome. In response to these comments, we reviewed the proposal and made changes where we could without compromising the ability of regulatory agencies to determine whether an owner or operator is in compliance.

We disagree that it is inappropriate to use the type of monitoring, recordkeeping and reporting in an NSPS rule that is typically found in a NESHAP rule. There is nothing inherent in section 111

of the CAA that necessitates some reduced level of compliance certification compared to that of section 112. We are well aware of the remote nature of many of the facilities subject to subpart OOOOa, and we believe we have appropriately taken this into account throughout the rule, even though some of the compliance requirements mirror those found in NESHAPs.

See the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 33 and 181a and 181b, for further information regarding this issue.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 23

Comment: Next Generation Compliance

Issue – API believes the Next Generation Compliance Options discussed in the proposal preamble are unnecessary and represent an overreach by EPA of its authority. API believes the Next Generation Compliance Alternatives discussed in the preamble are not feasible or legal, nor do they achieve goals of assuring better compliance.

Recommendation – EPA must justify the legal basis for and formally propose any Next Generation Compliance provisions in a separate rulemaking before adopting them.

Response: See section VIII.H of the preamble to the final rule for information regarding this issue.

11.1 Combustion Control Devices

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 40

Comment: Control Devices in Compliance with NESHAP Subpart HH Should be Exempt

There is a high likelihood that a site with equipment subject to MACT HH (40 CFR 63, Subpart HH) will also have affected facilities subject to Subpart OOOOa. In these situations, it is possible a control device will be used to comply with both MACT HH and Subpart OOOOa. This could result in the same control device being subject to requirements under both Subparts that are not entirely aligned. In order to avoid these needless requirements, API requests that §60.5412a clearly state that control devices that are subject to 40 CFR 63, Subpart HH are exempt from the requirements in Subpart OOOOa. Following is recommended regulatory language to clarify this exemption.

§60.5412a

You must meet the applicable requirements of this section for each control device used to comply with the emission standards for your centrifugal compressor affected facility, pneumatic pump affected facility, or storage vessel affected facility. Control devices in compliance with the requirements in §63.771 of 40 CFR 63, Subpart HH are exempt from the requirements in this Subpart.

Response: The EPA disagrees with the commenter that there should be a blanket exemption from the requirements of subpart OOOOa for all control devices that are also used to comply with 40 CFR part 63, subpart HH. The EPA has already incorporated into subpart OOOOa specific requirements related to overlap with subpart HH. For example, the combustor control device manufacturer test protocol and associated reporting requirements have been aligned with subpart HH. Additionally, §60.5395a(e) states, "This subpart does not apply to storage vessels subject to and controlled in accordance with the requirements for storage vessels in 40 CFR part 60, subpart Kb, 40 CFR part 63, subparts G, CC, HH, or WW." The EPA has aligned subpart OOOOa with subpart HH where it was reasonable to do so. To the extent that there are other discrepancies remaining between the rules that we did not identify, the commenter did not provide those specifics such that we are able to address them here.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 61

Comment: Under OOOOa, EPA proposes quarterly testing of emissions using EPA Method 22 for manufacturer-tested combustion control devices for one hour. For non-manufacturer tested devices, OOOOa requires monthly testing for 15 minutes using Method 22. However, in the proposed CTGs, the rule imposes different testing protocols, instead, requiring monthly testing using Method 22 for manufacturer-tested devices. We recommend that the quarterly testing of emissions be consistent and that for both Subpart OOOOa and CTGs, operators should have a choice between either monthly testing for 15 minutes or quarterly testing for one hour, regardless of whether the flare is manufacturer-tested.

Response: EPA agrees with the commenter and is finalizing amendments to make the requirements for monitoring of visible emissions consistent for all enclosed combustion units. Currently enclosed combustors that have met the Manufacturer's Performance Test requirement must conduct quarterly observation for visible smoke emissions employing section 11 of EPA Method 22 for a 60 minute period. 40 CFR 60.5413a(e)(3). Certain petitioners suggested it may ease implementation to adjust the frequency and duration to monthly 15 minute EPA Method 22 tests, which are currently required for continuous monitoring of enclosed combustors that are not manufacturer tested. 40 CFR 60.5417a(h)(1). If this change were made, all enclosed combustors would have the same monitoring requirements which could potentially make compliance easier for owners and operators. Because both monitoring requirements assure compliance of the enclosed combustors, and having the same requirement would ease implementation burden, we are promulgating amendments in 40 CFR 60.5413a(e)(3) to require monthly 15 minute-period observations using EPA Method 22 Test, as suggested by the petitioner.

Commenter Name: Alvyn A. Schopp, Chief Administration Officer and Regional Vice President and Treasurer
Commenter Affiliation: Antero Resources Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6935
Comment Excerpt Number: 15

Comment: The frequency of the visible emissions tests for combustion control devices should remain quarterly instead of increasing to monthly.

USEPA proposes to increase the frequency for visible emission tests at 40 CFR § 60.5413(e)(3) and to impose the same test frequency under the proposed 40 CFR § 60.5413a(e)(3). A visible emissions test conducted according to section 11 of Method 22 must be performed at least once every calendar month, separated by at least fifteen (15) days between each test. The observation period shall be fifteen (15) minutes with no visible emissions, except for periods not to exceed one (1) minute. Antero notes that the requirement represents an increase in test frequency from quarterly to monthly, which is unsupported by any cited need. Antero sees no justification for the increase and the time differential simply adds to the regulatory burden of the rule. Antero suggests the frequency of the visible emissions test should remain quarterly instead of increasing to monthly because once production begins, operations are at a relatively steady state but with declining production and, therefore, declining emissions.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-6930, Excerpt 61.

Commenter Name: Eric Schaeffer, Sparsh Khandeshi and Adam Kron, Environmental Integrity Project (EIP) on behalf of Adrian Shelley III, Executive Director
Commenter Affiliation: Air Alliance Houston et al.
Document Control Number: EPA-HQ-OAR-2010-0505-6953
Comment Excerpt Number: 20

Comment: EPA Should Require 98-Percent Removal of Methane and VOC Content from the Vapor Recovery Units, Combustors, and Flares that Serve Oil and Gas Plants

Based on permit application data from West Virginia and other states, facilities are having no trouble meeting the EPA standards and in fact, are claiming to recover 98% or more of the methane/VOC content of waste gases from tanks, dehydrators, compressors, and other sources. As the permit applications make clear, the representations in these documents are based on manufacturer warranties. Importantly, the enforceable emission limits in these permits are based on the assumption that these control devices will remove at least 98 percent of the TOC in gases routed to vapor recovery units, combustion devices, or flares.

[Appendix E - "West Virginia Condensate Tank Control Devices and Control Device Efficiency" containing a 1-page table listing control device efficiencies of different control devices, the facility, well pad, permit number and date of issuance/application date.]

The available data no longer supports EPA's assumption that 95-percent removal represents BSER for methane or VOC control devices. EPA's proposal should recognize that these control devices already are capable of 98-percent removal rates and adopt that standard in the final rule.

Response: Similar comments were raised concerning the level of control for storage vessel emissions in the August 23, 2011 proposal for subpart OOOO. In response to those comments, the EPA stated:

"The EPA disagrees with the commenters who contend that 98 percent control is technically achievable on a continuous basis. The data we have reviewed support a BSER level of 95 percent control and indicate that 98 percent control cannot be achieved continuously for all tanks. Therefore, 98 percent control cannot be considered BSER." (2012 RTC, p. 128)

While we continue to believe that BSER is 95% for this rulemaking, EPA does note that during our review of the 19 different makes/models of combustors for which manufacturer's submitted tests, each reported destruction efficiencies above 99.9%, as tested. Coupled with the requirement for the unit to meet <10 ppm CO and <10 ppm THC corrected to 3% CO_2 continuously, should ensure that efficiencies >98% should be achievable. As the use of these devices becomes more widespread, the EPA will be able review their impact on BSER in a subsequent technology review.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 54

Comment: Third-Party Data Reporting (e.g. Vendors)

EPA's Concept of Having Control Device Vendors Provide Direct Submittals to the Agency is Both Flawed and Unnecessary

In Section X of the preamble, EPA solicits comment on potential third-party approaches such as the "post card" reporting described above that could be implemented to streamline and enhance compliance (FR 56651).

In the preamble, EPA appropriately acknowledges the limitations to how such an approach might work for the oil and natural gas sector:

"We understand the issues for this sector, with making the ''postcard'' model work as we envisioned. One of the issues is related to the granularity of the reporting by the manufacturer as compared to the reporting by the source to the EPA or delegated authority. For example, the manufacturer may only know that they sold 500 units of a particular control device, but may not know where it is actually installed. Lack of a unique ''user ID'' being reported by both sides can limit the utility of the postcard model in this instance."

Requiring manufacturers to provide data to EPA regarding the number of control devices sold to different companies adds no value and could even likely be a source of confusion to reconcile which specific piece of equipment went where. Further, in many cases where the same model control device is installed in many locations, what matters is how that equipment is operated on site, not what serial number is on a particular control device.

For example, when an owner or operator purchases a "certified control device" from a vendor, the owner would be required to submit the model and serial number to the Agency. Additionally the vendor would be required to submit the same information, thereby confirming what the owner had reported. This is unnecessary burden on both the operator and the vendor, and is unprecedented in its duplicative reporting. As noted above, owner/operators will often buy units in bulk and not install these units for months or even years. This will cause unnecessary tracking and verification of installations against vendor-supplied data to EPA. The serial numbers of equipment are available at all times and if a question is ever raised about the unit, the Agency could then contact the vendor with any questions for verification. Having dual reporting will continually lead to confusion and unnecessary time spent reconciling equipment versus reporting.

Response: The EPA agrees with the commenter that there are limitations to the "post card" model for this industry. Therefore, we are not including "post card" reporting by control device manufacturers in the final rule.

Commenter Name: Eric Schaeffer, Sparsh Khandeshi and Adam Kron, Environmental Integrity Project (EIP) on behalf of Adrian Shelley III, Executive Director,
Commenter Affiliation: Air Alliance Houston et al.
Document Control Number: EPA-HQ-OAR-2010-0505-6953
Comment Excerpt Number: 19

Comment: Operators that Use Combustors Must Demonstrate Compliance by Reducing the Concentration of Total Organic Compounds in the Outlet of the Combustor to 20 ppm

1. EPA Should Not Allow Sources to Demonstrate Compliance with Vapor Recovery or Combustion Control Requirements Based on an Outlet Emission Rate of 600 ppmv for Total Organic Compounds.

For reasons that are unclear, EPA is proposing to allow facilities to demonstrate compliance with the vapor recovery/combustion control requirements where the total organic content (TOC) of gas at the outlet of the control device is 600 ppmv or lower:

"[P]etitioners also assert that the previous performance testing requirements were unreasonably strenuous for a control device needing to demonstrate 95 percent control efficiency. They assert that in order for an enclosed combustor to meet a requirement of 20 parts per million volume (ppmv) it would have to be achieving greater than the required 95 percent control. After an evaluation of the requirement we agree with the comment and are proposing to revise this requirement from 20 ppmv to 600 ppmv; a value that more appropriately reflects 95 percent control of VOC inflow to these control devices."

EPA apparently proposed this provision in response to comments from the American Petroleum Institute. EPA should not adopt this proposed provision, as API's comments either misunderstand or misrepresent the 2012 compliance demonstration requirements for control devices, and the proposed rollback would allow substantially higher emissions of both methane and VOCs.

The 2012 standard requires that facilities test total organic carbon (TOC) concentrations at the inlet and outlet of control devices to assure that at least 95 percent of the inlet TOC is recycled (e.g., through vapor recovery) or destroyed in a combustion chamber or flare. As an alternative, facilities may demonstrate compliance whenever TOC concentrations at the outlet are 20 ppmv or less, regardless of whether the 95% removal requirement has been met. In other words, once outlet concentrations decline to 20 ppmv or less, affected facilities do not need to demonstrate that their control devices meet the 95-percent removal requirement. The alternative recognizes that if inlet TOC concentrations decline below a certain level, it may be difficult to recover or combust 95 percent of TOC before the gas is released at the outlet.

EPA's proposal would turn this requirement on its head by adopting a "one size fits all" emission limit, for which there is no basis in the record. EPA has already determined that the Best System of Emission Reduction (BSER) is based on vapor removal or combustion devices that recover or destroy at least 95 percent of the TOC concentration before gas is released to the environment. The proposal could work only if the proposed 600 ppmv limit always met the 95-percent removal standard across the full range of operating conditions at every affected well site, condensate tank, or dehydrator. That is unlikely, as it assumes a more or less uniform TOC concentration in the inlet gas across a wide range of operating conditions and without regard to differences in the quality of the waste gases (including varying levels of TOC content, water vapor, oxygen levels, impurities, etc.) that are routed to these control devices. Regardless, EPA has not presented any information that would allow commenters to determine whether this proposed new alternative has any relationship to TOC content of inlet gas, or to the efficiency of control devices.

Also, allowing facilities to comply with 600 ppmv limit at the outflow of a combustor, even if it is sufficient to assure 95-percent destruction efficiency would not be sufficient to assure compliance with the requirement that storage vessels control all emissions by 95%. As discussed above, storage vessels have PRDs that often vent gas when the flow level spikes. Therefore, complying with a minimum 95-percent destruction efficiency would require facilities to eliminate all releases from PRDs.

Allowing facilities to release TOC at these concentrations, regardless of whether facilities have achieved the 95-percent removal that EPA has identified as BSER would roll back the 2012 standards and authorize VOC and methane emissions at a much higher rate than is currently allowed under those standards.

Response: EPA continues to believe that performance testing of enclosed combustors is necessary to assure that they are achieving the required 95 percent control. However, petitioners also asserted that the previous performance testing requirements were unreasonably strenuous for a control device needing to demonstrate 95 percent control efficiency. They asserted that in order for an enclosed combustor to meet a requirement of 20 parts per million volume (ppmv) it would have to be achieving greater than the required 95 percent control. After an evaluation of the requirement we proposed to revise this requirement from 20 ppmv to 600 ppmv; a value that we believed more appropriately reflects 95 percent control of VOC inflow to these control devices. The EPA solicited comment on the appropriateness of this level of control and invited commenters to provide data that demonstrates the VOC composition of field gas from a variety of oil and gas field well sites across the nation.

The EPA disagrees with the commenter's interpretation of how the provision works, and how the proposal intended to change the standard. The performance test criteria in §60.5412(a)(1)(i) and (ii) are exclusive options, meaning that a source showing initial compliance may use either paragraph (a)(1)(i) or (ii) to show compliance, and need not show that both are met to show compliance. EPA does not agree that allowing two options for compliance is a standard that can be characterized as "one size fits all." EPA further disagrees that our intent was to make the performance criteria less stringent. Rather, EPA sought to adjust the ppmv value to reflect

equivalency to the 95 percent control standard, when the control device is operating to control lower inlet concentrations.

In review of the proposal, a different commenter provided information related to the standard indicating that EPA's assumption about the ratio of fuel to combustion air was in error. We agreed with the commenter and the outlet concentration of TOC has been adjusted downward to 275 ppmv, as propane, at 3 percent O_2. We have made the change to 60.5412(a)(1)(ii) to reflect this correction and have appended the memo in the docket with this adjustment.

See section VI.H.1 of the preamble to the final rule for more information on this issue.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 47

Comment: We recommend the proposal to revise this requirement from 20 ppmv to 600 ppmv; a value that more appropriately reflects 95 percent control of VOC inflow to these control devices. We caution the EPA to be very careful in regards to the public health and safety aspects that are related to requirements concerning parts per million volumes. We further recommend the EPA exercise caution in revising this provision any further.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6953, Excerpt 19.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 184

Comment: API Supports EPA's Revision of The Concentration of Exhaust Limit to 600 PPMV

In response to "reconsideration petitioners", EPA proposed to revise the combustion device compliance option of demonstrating an exit concentration of less than 20 ppmv to 600 ppmv as propane (see §60.5412a(a)(1)(ii) and §60.5412a(d)(1)(iv)(B)) as being more representative of a 95% reduction in VOC. EPA solicited comments on this proposed amendment (see 80 FR 56645). API agrees that an exit concentration of 600 ppmv is more representative of a 95% destruction efficiency and supports this proposal.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6953, Excerpt 19.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 183

Comment: Percent Reduction of Pollutant Should Be Based On Volume Not Mass and Should Not Requirement Measurement of Flow to The Control

The standards for centrifugal compressors, pneumatic pumps, and storage vessels each require a percent reduction.

- For centrifugal compressors, §60.5380a(a)(1) requires that methane and VOC emissions be reduced by 95.0 percent or greater;
- For pneumatic pumps, §60.5393a(b)(1) requires that natural gas emissions by 95.0 percent, and
- For storage vessels,§60.5395(a)(2) requires that VOC emissions be reduced by 95.0 percent.

Note that none of these standards specify the basis for the 95.0 percent reduction. However the initial compliance demonstration requirements in §60.5412a(a)(1)(i) for centrifugal compressors and pneumatic pumps and in §60.5412a(d)(1)(iv)(A) for storage vessels add the requirement that this percent reduction in emissions be determined on a mass basis. The associated performance test requirements of §60.5413a(b)(3) for calculating percent reduction by weight of pollutants requires the measurement of flow to the control device. The requirements of §60.5412a and §60.5413a were predominantly adopted from the major source NESHAP requirements in Subpart HH that specify control requirements of 95 percent reduction by weight. While mass reduction requirements may be appropriate and specified by Subpart HH, they are burdensome and impractical for NSPS requirements for small, remote, dispersed and unmanned production facilities.

Section 12.1.3 above describes the many difficulties encountered when attempting to measure the flow of vapors to a control device at oil and natural gas production sites. EPA has not explained the reason for prescribing the reduction of pollutants to be determined by weight in the compliance demonstration and performance testing requirements when a mass destruction was not specified as part of the control requirements. Conditions of intermittent high/low flow conditions, variable and turbulent flow, and variable temperature and pressure make it infeasible to perform the test methods in the production field that are typically used in refineries or chemical plants. Coupled with the dispersed and remote nature of the small sources regulated under this rule, the proposed requirements are not appropriate and are unnecessarily burdensome. API requests EPA to determine percent of TOC reduction through a carbon balance methodology similar to that described in EPA's Flare Efficiency Study Report.

The requirement in §60.5413a(b)(3) should be modified to require reduction of TOC emissions by 95% on a volumetric concentration basis using a "carbon balance" methodology for analysis

of the exhaust stack effluent from an "enclosed combustion device" being used as a control device to demonstrate reduction efficiency.

Methodologies 25A for TOC (calibrated to propane), 3A for CO2 and O2, and 10 for CO should be specified for testing of the stack effluent gas. The CO2 measured using Method 3A should be adjusted downward by the latest published atmospheric CO2 concentration, as reported from the Mauna Loa monitoring site by NOAA's Earth System Research Laboratory, multiplied by the ratio of O2 measured in the stack effluent as compared to the ambient O2 content of 20.8 volume %. (3A measured CO2 (ppmv) – (Mauna Loa Concentration (ppmv) X (3A measured O2 (ppmv)/208,000 (ppmv) ambient O2 concentration).

The percent pollutant reduction or destruction efficiency of 95% would be demonstrated when the following equation yields a value of 95% or greater:

(CO2c +CO)/(CO2c +CO+(3*TOC))

Where:

CO2c = CO2 ppmv concentration measured in the stack via method 3A minus the ambient CO2 ppmv concentration present in the stack determined as described above.

CO = CO concentration measured in the stack via method 10

TOC = Total Organic Carbon, expressed as propane, measured in the stack via method 25A
The following Table 12-1 shows this calculation and outcome for an assumed stack effluent composition:

Table 12-1 Assumed Stack Effluent Composition [shows Outlet CO2 30,000 (measured value), CO 100, TOC 30, O2 150,000 Ambient O2 208,000, Outlet CO2 from combustion 29,270 (Outlet CO2 - ((Ambient CO2 X (Outlet O2/Ambient O2)) and destruction efficiency 99.70 (CO2c = CO)/CO2c = CO + (3*TOC))]

Response: The EPA disagrees with the commenter. It is clearly stated in in §60.5412a that the owner or operator must "reduce the mass content" by 95%. This is also clearly indicated by the testing demonstration requirements, as the equation for control efficiency uses the mass rates of TOC. Destruction efficiency on a mass basis is the format that the EPA uses throughout the regulations in part 60 and part 63. It would be inappropriate to determine percent reduction on a volume basis for most sources, especially combustion sources, because a facility would be able to prove compliance with the limit by simply diluting the outlet gas. Because the outlet volumetric concentration is a function of the amount of stack gas present, by increasing the combustion air, which is likely to contain minimal organics if any, the outlet concentration of TOC will decrease without ever having to remove any of the TOC. Thus, this demonstration does nothing to prove the destruction efficiency of the unit. We also note that testing should be performed under steady-state conditions, such that large fluctuations in flow, temperature and pressure are not occurring. Each test run is only required to be one-hour long, and we believe that sources should be able to operate under steady conditions for that length of time.

We disagree that a carbon balance approach is appropriate for determining the percent reduction efficiency. First, the cited document discusses combustion efficiency, which is related to but not the same as reduction or destruction efficiency. Second, the cited document clearly states (and demonstrates) that this equation can be inaccurate if soot is not taken into account, as soot is a carbonaceous material. In fact, one of the results was off by over 8%. This is an unacceptable degree of variance when there are more accurate methods for determining efficiency. While Method 25A will not measure soot, it will measure organic concentration on both the inlet and the outlet of the control device in order to determine destruction efficiency of organic compounds. As the performance test should only occur under normal (e.g. steady-state conditions), there should be no issue with measuring the inlet concentration.

We also disagree that a downward correction factor should be applied to the stack gas to account for atmospheric concentrations. Because the stack should be filled with stack gas and not atmospheric gas, there is no need to correct for atmospheric concentrations.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 41

Comment: While EPA Has Been Testing Various Manufacturer Devices, the Process has been Slow

NSPS Subpart OOOO (40 CFR 60, Subpart OOOO) and MACT HH and HHH (40 CFR 63, Subparts HH and HHH) allow for the use of combustion devices that are tested by the manufacturer which eliminates the need for source testing at the site. EPA maintains a list of approved Combustion Control Devices on their website. EPA has also stated that the current "approved list" will be adopted for OOOOa. API requests confirmation of this in the response to comments to reflect EPA's intent.

However, there are several issues with the approval process. First, more than half of the devices listed on the website are characterized as "under review", and they have maintained this status for a long period of time (one or more years). According to one manufacturer, the approval process should be less than a month. The NSPS will result in the need for many more combustion devices to control existing sources, which increases the need to step up the approval process. Closer inspection revealed that incomplete test reports may be a possible cause for achieving "under review" status, and therefore it may not be a fault of EPA's process. However, EPA needs to investigate the cause for these long delays in this approval process and correct them.

Second, manufacturers report that relief from propene testing would decrease the testing costs considerably. It makes no sense to require propene testing for combustion devices that will be used at oil and natural gas production facilities as there are insignificant amounts of double bond

hydrocarbon compounds in natural gas. API requests that §60.5413a(d)(2) be modified as follows to allow the use of propane to expedite the approval process.

(2) Performance testing must consist of three 1-hour (or longer) test runs for each of the four firing rate settings specified in paragraphs (d)(2)(i) through (iv) of this section, making a total of 12 test runs per test. ~~Propene (propylene)~~ Propane gas must be used for the testing fuel. All fuel analyses must be performed by an independent third-party laboratory (not affiliated with the control device manufacturer or fuel supplier).

Response: The list to which the commenter refers is not a list of EPA-approved devices, because EPA does not approve control devices, nor do we perform the test ourselves. Rather, the list documents control device models for which test results have been submitted to the EPA for review. Those units which reflect a "YES" in the column entitled "Control Device Demonstrates Performance Requirements" means that the manufacturer has demonstrated that the specific model of control device listed achieves the combustion control device performance requirements in NSPS subpart OOOO and NESHAP subparts HH and HHH through performance testing conducted as specified in these subparts. The EPA publishes the list for the convenience of potential users who are seeking devices that have been tested according to EPA protocols. The status of "under review" are instances where the EPA has initiated a review and sought additional information from the entity submitting the test results, and the review is therefore still underway. The EPA does not control how quickly an additional request for information from the submitting entity can be fulfilled.

The EPA notes that propene gas has long been the standard fuel for flare testing, and is a more rigorous fuel with which to display performance than propane, methane or ethane. In addition, it is not feasible to require field gas as the test fuel as field gas varies greatly by region and basin and transport to the manufacturer would be difficult. Propene was chosen as the manufacturer test fuel to ensure that a tested model would sufficiently destruct VOC in the field and was also used as a test fuel by another combustor manufacturer when performing controlled testing of combustors in recent years.

11.2 Pressure-Assisted Flares

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 1

Comment: John Zink Hamworthy Combustion (JZHC) believes, for appropriate applications, pressure-assisted flares can be better for the environment than traditional air assisted or unassisted flares used in oil and natural gas production.

We encourage the EPA to create an approval pathway for manufacturer's to conduct performance tests on pressure-assisted flare systems similar to the one provided in 40 CFR 60.5413(d) for the "Quad O" enclosed combustors.

Response: In order to evaluate the use of pressure-assisted flares by the oil and natural gas industry and determine whether to develop operating parameters for pressure-assisted flares for purposes of subpart OOOO and subpart OOOOa, the EPA solicited comment on where in the source category, under what conditions (e.g., maintenance), and how frequently pressure-assisted flares are used to control emissions from an affected facility, as defined within this subpart. Based on the comments received, the EPA is finalizing the rule as proposed, because no regulatory amendment appears necessary for such flares to comply with the proposed requirements. See section VI.H.5 of the preamble to the final rule for more information regarding this issue.

Commenter Name: Todd Mayer, Steffes Corporation
Commenter Affiliation: Steffes Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6981
Comment Excerpt Number: 5

Comment: In addition, we request information on:

a. (1) The importance of, and assessment of flame stability;
b. (2) the importance of, and ranges of the heat content of flared gas;
c. (3) the importance and ranges of gas pressure and flare tip pressure;
d. (4) the importance of and examples of appropriate flare head design;
e. (5) a cross-country review of waste gas composition;
f. (6) and appropriate methodology to measure the resultant flare destruction efficiency.

Steffes response to the above 6 items: Steffes believes that EPA is focusing on the appropriate technical criteria that are required for the successful deployment of PAF's that would meet EPA's >98% destruction capability. However, design differences between flares can lead to different results so any prescriptive design approach should have sufficient flexibility to

accommodate innovation while still satisfying EPA's statutory charge with respect to limiting emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Todd Mayer, Steffes Corporation
Commenter Affiliation: Steffes Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6981
Comment Excerpt Number: 8

Comment: As a final point, Steffes would recommend that EPA create an Advisory Committee to assist it in the development of performance and design criteria for pressure assisted flares that would assure compliance with EPA's environmental goals (i.e., >98% destruction) without stifling innovation. In such an event, Steffes would welcome the opportunity to participate and share our knowledge and years of experience with flaring technology.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 22

Comment: Miscellaneous Requests for Input

- EPA requested input on "pressure-assisted flares." IPAA/AXPC is not entirely clear what EPA is referring to as pressure-assisted flares. To the extent IPAA/AXPC understands the type of flare EPA is referring to, IPAA/AXPC does not believe there is any reason to treat these flares differently than any other flare. Or stated slightly differently, pressure-assisted flares should be treated as any other flare subject to the Subpart OOOO and proposed Subpart OOOOa regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 42

Comment: Pressure-Assisted Flares Can Play a Critical Role in Controlling Emissions from Natural Gas Processing Plants

In the proposed rule, EPA solicits a series of comments on the use of pressure-assisted flares, asking, among other things: where in the source category, under what conditions (e.g., maintenance), and how frequently pressure-assisted flares are used to control emissions from an affected facility, as defined within this subpart.

80 Fed. Reg. at 56,646. Some of GPA's members use pressure-assisted flares and GPA believes these comments will assist EPA in understanding how such flares are used in the oil and natural gas industry. GPA's member companies use pressure-assisted or sonic flares at natural gas processing plants, where they are designed specifically for large volume flows, such as a full gas plant blowdown. These flares have tulip-shaped tips that increase turbulence during high velocity flow, thus increasing the air/fuel mixture. This improvement in air/fuel mixing leads to a more complete combustion during high velocity flow.

Pressure-assisted flares are not designed for continuous use, but instead operate in emergency or upset situations where high volumes and pressures are sent to the flare. Pressure relief valves are routed to these flares for the purpose of emergencies or upsets. Maintenance events are also routed to these flares in some cases. GPA's members have tested pressure assisted flares and have also collected manufacturer data to confirm that these flares meet the general requirements found in 40 C.F.R. § 60.18 during low flow conditions.

To work effectively, pressure-assisted flares must satisfy several operational conditions. Flame stability is of great importance for the operation of pressure-assisted flares. Each arm on the flare has a fitted sonic discharge nozzle. The nozzles provide stabilization for the flame at high and low pressures. The nozzles have a series of lugs, behind which are a number of gas bleed holes. These holes allow some of the gas to escape the nozzle and effectively multiply the pilot heating power. This greatly contributes to flame stability across all operating and atmospheric conditions. In addition, the flare head design is crucial to the operation of the pressure-assisted flare. The flare destruction efficiency of a pressure-assisted flare can be established through factory or manufacturer testing prior to installation.

The design features of pressure-assisted flares provide a number of significant benefits. First, pressure-assisted flares can operate under a wider range of heat content than other flares due to the turbulent mixing of air and gas. Second, pressure-assisted flares can operate under a wide range of gas and flare tip pressures due to the turbulent mixing of air and gas. At a low pressure, during normal operations, the blowers that provide pressure-assistance do not need to be used. However, at a high pressure, these blowers operate, increasing the combustion capability and hence the destruction efficiency of the flare.

GPA believes that pressure-assisted flares can play an important role in controlling emissions from gas gathering and processing facilities, particularly under emergency or upset conditions. Therefore, we urge EPA to consider these flares as acceptable control devices for oil and gas affected facilities requiring controls under this and other NSPS provisions. We look forward to working with EPA to develop regulations that can incorporate pressure-assisted flares while

making necessary adjustments to account for the unique conditions present during emergency and upset conditions where such flares are most valuable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Richard A. Hyde, P.E., Executive Director
Commenter Affiliation: Texas Commission of Environmental Quality (TCEQ)
Document Control Number: EPA-HQ-OAR-2010-0505-6753
Comment Excerpt Number: 16

Comment: Sonic Flares and Control Technology - Pressure-Assisted (Sonic) Flares. The TCEQ supports allowing the use of pressure-assisted flares (sonic flares) as a substitute for the conventional flares regulated by 40 CFR §60.18 in certain circumstances. State and federal regulations restrict the use of flares during routine operations to steam-assisted, air-assisted, or non-assisted flares by referencing the requirements of 40 CFR §60.18. A key regulatory issue in 40 CFR §60.18 is the maximum allowable flare gas velocity at the burner exit. The maximum gas exit velocity allowed for a gas stream with a heating value greater than 1,000 Btu/scf (37.23 MJ/scm) is 400 ft/sec (122 m/s). Pressure-assisted flares utilize the waste gas pressure to create a condition where air is drawn into contact with the gas and mixed to achieve effective and smokeless combustion. This results in pressure-assisted flares operating at sonic exit velocities greater than 400 ft/sec.

For some sites in Texas, the oil and gas industry relies on sonic flares to effectively control VOC (and methane) emissions during planned maintenance, startup, and shutdown (MSS) activities. The use of these flares is necessary because conventional flares which meet 40 CFR §60.18 cannot operate at higher pressures, such as those within pipelines or process vessels. Multiple observations have occurred with these flares in operation, and numerous regulated entities have provided technical operational and control information which demonstrates that sonic flares can achieve 99 percent destruction or removal efficiency (DRE).

However, pressure-assisted flares must be designed and operated such that: 1) the combustion zone gas net heating value will achieve maximum flare destruction efficiency (greater than 98 percent); or 2) that the combustion zone gas lower flammability limit is less than or equal to a set design limit for maximum flare destruction efficiency. Since the design of the pressure-assisted flares must operate within set parameters, the flare operator should install and operate pressure monitors to ensure that the sonic flare operates within the range of testing conditions or within the range of the manufacturer's specifications.

Manufacturer-certified sonic flares and control devices. In addition, TCEQ recommends that the EPA apply the current NSPS Subpart OOOO regulatory framework for the use of specific models of sonic flares. Specifically, an owner or operator that purchases a specific model of control device that the manufacturer has demonstrated to achieve the combustion control device performance requirements in NSPS OOOO (a "listed device") should be exempt from conducting its own performance test and submitting test results.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 2

Comment: Use of Pressure-Assisted Flares in the Oil & Gas Industry

Zeeco supplies pressure-assisted flares for both rental and purchase. Such flares typically are portable. Pressure-assisted flares can be employed at the wellhead when a pipeline is unavailable, can be used during pipeline downtime and for pipeline blowdown, and can be used in natural gas processing. The advantage of pressure-assisted flares at the wellhead is that wellhead gas under pressure is used as the assist medium to promote smokeless flaring. At such locations, no steam or air utility is typically available; the wellhead gas assist provides smokeless combustion where a conventional flare (designed in accordance with 40 CFR 60.18) could not, absent steam or air combustion assist.

The use of pressure at the flare tip creates turbulence which in turn provides air mixing and more complete, smokeless combustion. With pressure assist, gas can be combusted with less radiant heat which equates to a smaller flare stack, and hence a lower capital cost. The flare tip lasts longer, which improves operation and maintenance considerations.

At gas plants, process safety valves (associated with pressure relief) are likely routed to a flare. A pressure-assisted flare can operate more effectively with large pressure relief events associated with malfunctions or plant blowdowns necessitated by pipeline unavailability. A portable pressure-assisted flare can be brought in while other emissions control devices are undergoing maintenance. A smaller flare using pressure assist can do the same job with a lower energy profile than a conventional flare, since no ongoing steam generation or air blower operation is needed.

The basis of current 40 CFR 60.18 flare limits are data from 1983 and 1984 studies which simply did not evaluate test conditions with velocities beyond the currently allowed limit of 400 feet/second. Recent EPA enforcement efforts based on this old and limited information, and substantial case-by-case industry efforts to provide extensive, detailed pressure-assisted flare data to EPA are a waste of resources, akin to enforcing speed limits and demonstrating traffic safety at speeds exceeding 30 miles per hour under all conditions. Pressure assisted flares were invented over 40 years ago and have been successfully and effectively used in numerous applications. Regulations should be updated to reflect improved technology and data, and more varied applications.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Todd Mayer, Steffes Corporation
Commenter Affiliation: Steffes Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6981
Comment Excerpt Number: 4

Comment: Specific Questions Asked by EPA

1. "EPA is soliciting comment on:"
a. where in the source category,
Steffes response: Steffes is familiar with the use of PAF's in the production of oil and gas wells.

b. under what conditions (e.g., maintenance),
Steffes response: In the context of oil and gas exploration, Steffes has observed the use of PAF's to destroy hydrocarbons until such time as a pipeline is available.

c. and how frequently pressure-assisted flares are used to control emissions from an affected facility, as defined within this subpart.
Steffes response: PAF's are not uncommon.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Todd Mayer, Steffes Corporation
Commenter Affiliation: Steffes Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6981
Comment Excerpt Number: 2

Comment: As a preliminary matter, Steffes would like to commend EPA on addressing this important issue. Pressure assisted flares ("PAF") provide developers with a practical solution to managing emissions during oil and gas well exploration. It should be noted that many times, neither gas transport pipelines nor electricity is available for months after the initial start-up of an oil well, and flaring of such gas with efficient pressure assisted flares provides numerous environmental and safety benefits. Moreover, as EPA notes, ". . . compliance with the NSPS emissions limits can be achieved using" pressure assisted flares. (80 FR 56646). Steffes concurs on this point

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 1

Comment: "Next Generation" Compliance: Third Party Information Reporting and Control Device Manufacturer Reporting of Customers & Installations

Flares used by Zeeco customers at oil and gas installations are usually portable, to allow customers to move them from site to site as individual wells diminish. We often do not know the precise location of an installation, or a customer may move the flare from one location to another without our knowledge. In short, whether a flare is rented or purchased, Zeeco often does not know the ultimate location of a flare. Therefore, manufacturer reporting to correlate with operator usage imposes an additional administrative burden with no meaningful added value.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 2

Comment: We believe there is ample test data showing properly designed pressure-assisted flares operate with high destruction efficiency at all times when a stable flame is present. *Table 1* show various test reports submitted to the EPA that include data from pressure-assisted flares results.

For pressure-assisted flares, operator intervention and operator judgments are not required to achieve high destruction efficiencies and smokeless operation as the flare gas flow rate changes. These are significant advantages of pressure-assisted flares. For suitable application, pressure-assisted flares can be better for the environment than unassisted or air assisted flares. (Steam-assisted flares are uncommon in the oil and natural gas production industry.) Pressure-assisted flares should be available for all operating conditions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 3

Comment: Flame Stability, Heat Content, Gas Pressure/Flare Tip Pressure, Flare Head Design

Combustion of rich gases utilizing the inherent gas pressure to promote air mixing is a much preferred and less cumbersome method to achieve smokeless flaring. With a stable flame, destruction efficiencies are excellent for pressure-assisted flares. Some example test data

follow. A variety of gases and gas mixtures have been evaluated at Zeeco, including natural gas, propane, propylene, and mixtures of these with nitrogen and carbon dioxide.

[Figure 1: DRE vs. LHV Based on Fuel Gas]

In Figure 1, "NG 1.76 1 tip" means 1 tip, burner exit area 1.76 in2. "NG_87/N2_13" means a gas composed of 87% natural gas and 13% nitrogen; C3H6 means propylene. "NG" means natural gas in all figures and tables. LHV=NHV.

[Figure 2: DRE vs. LHV based on Tip Pressure**.** Note that no additional text/description was provided for Figure 2 beyond the table itself.]

[Figure 3: DRE vs. Flare Gas Exit Velocity]

The information in Figure 3 represents a total of 64 test runs. Flare gas mixtures ranged from a molecular weight of 6.58 to 44.1 and from LHVs of 440 to 2316 BTU/SCF. The mixtures were tested at operating pressures from 3 to 30 psig.

Table 1: Comparison of PFTIR vs. Extractive Sampling

Gases	C_3H_8	C_3H_8/N_2	C_3H_6	NG
LHV (BTU/SCF)	2316	1251	2183	937
Exit Velocity (ft/s)	841.4	969.9	869.8	1443.5
Mach Number	1.00	1.00	1.00	1.00
Flare Operating Pressure (psig)	16.0	10.3	16.9	15
CE (%) from Extractive Sampling	99.99%	99.99%	99.96%	99.99%
CE (%) from PFTIR	99.60%	99.90%	99.60%	99.50%
DRE (%) from Extractive Sampling	99.99%	99.99%	99.99%	99.99%
DRE (%) from FlareSENTRY*	99.80%	99.55%	99.90%	99.70%

*FlareSENTRY is an optical-based monitoring technology developed by Providence Photonics, LLC, which remotely measures the DRE of flares. The unique capabilities of this new technology allow for continuous and autonomous monitoring of DRE with no operator input required. FlareSENTRY can also monitor the pilot ignition and provide a smoke index that can be used to predict the presence of smoke in the combustion plume. This technology will provide flare operators with real-time data to ensure optimal DRE while maintaining smokeless performance. An industrial interface allows for integration with Distributed Control Systems (DCS) to enable closed loop operations.

Table 2: High Destruction Efficiencies of Various Gases at Various Velocities

Fuel	LHV Btu/scf	Exit Velocity ft/sec	Destruction Efficiency %	Combustion Efficiency %	Operating Pressure (psig)
87% NG/13% N_2	800	1411	99.9988	99.9976	20
65% NG/35% N_2	600	1323	99.9983	99.9971	20
76% NG/24% N_2	700	1387	99.9972	99.9887	20
54% NG/46% N_2	500	1307	99.9964	99.9882	20
37% C_3H_6/63% N_2	808	1030	99.9979	99.9957	20

The preceding data in all figures and tables have been presented simply to illustrate the outstanding destruction efficiencies that can be achieved with pressure-assisted flares across a wide variety of gas compositions and associated BTU contents, gas pressures (tip pressures), and exit velocities. Proprietary flare tip design considerations include use of a spider-armed flare tip body with converging jet openings that will create eddies to facilitate air & gas mixing. The intent of various design factors is to provide flame stability over a range of operating conditions. With a stable flame, the results illustrated above can be achieved.

Zeeco has observed that a significant factor in flame stability may be not fuel BTU content, per se, but the proportional volume of inert gas (e.g., nitrogen) present, with high fractions of inert gas creating unstable flame and reduced destruction efficiency. High fractions of inert gas are not expected to be present in oil & gas applications. Note that in Table 2 above, the gas composition with the highest fraction of inert gas (63% nitrogen and 37% propylene) still performed well.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1. Concerning the comment stating that propylene (propene) is inappropriate for testing, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 41.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 3

Comment: Importance and Assessment of Flame Stability

a. Flame stability is critical to pressure-assisted flares as the EPA has essentially equated stability with high destruction efficiency in the Dow and ExxonMobil MPGF AMEL (EPA-HQ-OAR-2014-0738, FRL-9933-16-OAR).

b. Flame stability should be assessed on the minimum flare gas heating value and minimum design pressure.

c. Flame stability should also be determined at the maximum operating pressure as flame lift-off can occur which can result in flare instability.

d. Flame stability test protocol should include the most challenging composition expected for the application.

e. A test period maximum of 5 minutes should be required. Longer stability tests are not needed.

f. The EPA should not require propylene as a test fuel since it is rarely seen in oil and natural gas production and it more expensive than other common flare gas components.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 4

Comment: Importance and Ranges of Heat Content of Flare Gas

a. Pressure-assisted flares head designs should be tested over the range of heat contents appropriate to the application.

b. Low heat content flare gases are of greater concern than high BTU content flare gas because of poor flame stability.

c. If diluents such as carbon dioxide or nitrogen are present in the flare gas composition in significant quantities, the gas flare composition should be tested for flame stability.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 5

Comment: Importance and Ranges of Gas Pressure and Flare Tip Pressure

a. Properly designed pressure-assisted flares should operate with high destruction efficiency and smokelessly from purge to maximum designed flow rate.

b. Pressure-assisted flares typically perform better as the pressure and thus flow rate increase.

c. Pressure-assisted flares are designed to operate at sonic gas velocities. Sonic velocity is typically at 10 PSIG and higher.

d. Pressure-assisted flares need to be tested at higher pressures to determine the range of flame stability.

e. Flare manufacturer should establish a minimum and maximum operating condition.

f. Pressure-assisted flares generally operate most efficiently at high velocity. Some means of turn-down control may be needed. Turn-down control can be accomplished by staging or by using variable slot Coanda burners.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 6

Comment: Importance and Examples for Flare Head Design

a. Flare head design is critical for flame stability and emissions performance. Flare manufacturers have spent millions of dollars on the design and testing of pressure assisted flare heads.

b. A wide range of pressure-assisted flare head designs could be used in the oil and natural gas production industry. Different designs could exhibit different performance and each type should be tested.

c. Common Flare Head Designs

i. Coanda Effect Flares

1. The Coanda Effect flare utilizes the energy associated the high-pressure gas to produce the "Coanda Effect". The gases exit an annular slot mechanism on the flare tip body and are ejected radially at sonic velocity across the curved surface of the tulip bowl. The gases naturally adhere to the surface of the tulip bowl and as they pass along the curved surface it creates a strong local vacuum which draws large quantities of air into the gases prior to ignition and combustion. See graphic in *appendix 1*.

2. The pre-mix air/gas blend creates very efficient, smokeless combustion of the flare gases. The flame produced by this efficient pre-mixed combustion is a very low radiation, low luminance flame. The flame length is less than half of that produced by a conventional flare tip. The flame is also a thin, stiff, pencil shape that is not easily distorted or bent by crosswinds.

3. The San Joaquin Valley Unified Air Pollution Control District historically has recognized the high destruction efficiency of Coanda flares.

4. Variable slot Coanda burners allow for turn-down control by maintaining pressure at low flow rates.

5. Multiple head Coanda burners are commonly used to increase capacity.

ii. Spider Burners

1. Spider burners utilize multi-arm castings with small flare gas exit ports which divide the waste stream into many small jets. See graphic in *appendix 1*.

2. These gas jets exit the cast burner at sonic velocity and entrain large amounts of air enabling efficient combustion and smokeless operation.

3. A recirculation zone is generated by the burner geometry to pro-mote flame stability.

iii. Converging Nozzle Tips

1. Converging nozzle tips are high pressure burners that are essentially orifice restrictions. See graphic in *appendix 1*. Note the stabilization burner in the center.

2. As the gas flow is restricted, the velocity increases. Air is entrained as the flare gas stream exits the nozzle turbulently. Converging nozzle tips are unstable to high velocity and flame stabilization is required.

3. Above certain diameters, converging nozzle tips may not be able to entrain sufficient air to achieve high destruction efficiencies. Utilizing multiple smaller converging nozzle tips is a common solution. Multiple converging nozzle tips usually require a central flame stabilization burner. See picture in *appendix 2*.

4. Converging nozzle tips can operate inefficiently at low pressures.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 4

Comment: Cross-Country Review of Waste Gas Compositions

Waste gas compositions cross-country should be readily available to EPA through permitting information and air emissions inventory reporting processes.

Zeeco can provide examples of two common streams. Example gas compositions from North Dakota's Bakken area and Texas' Eagle Ford area are attached. We note that gas vapor content will decrease over time; time periods and extent of vapor decline vary by formation across the United States. Hydrogen sulfide content (relative proportion in the gas) can gradually increase over time, depending on the information. For the enclosed examples, the "LP" (low pressure) streams reflect gas composition following separation steps, while the "HP" (high pressure) streams reflect compositions where less separation has occurred following well exit.

Note the absence of propylene in the enclosed stream compositions. Yet the manufacturers' performance test for combustion control devices under both the current NSPS Subpart OOOO and the proposed Subpart OOOOa requires testing using 100% propylene. While the intent may be to ensure smokeless performance under worst-case conditions, use of 100% propylene is not particularly realistic or representative of the actual flare gases for combustion.

Response: See responses to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1 and DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 41.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 7

Comment: Cross-country Review of Waste Gas Compositions

Gas compositions commonly encountered in the oil and natural gas production are well suited for pressure-assisted flares. Methane to butane are well within the stability range for most pressure-assisted flare head designs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 5

Comment: Appropriate Methodology to Measure the Resultant Flare Destruction Efficiency

Zeeco has used extractive sampling in conjunction with PFTIR and/or other optical-based monitoring (i.e., FlareSENTRY developed by Providence Photonics) to measure flare destruction

efficiency for pressure-assisted flare tips. The extractive sampling has been used in conjunction with the optical monitoring for confirmation purposes. These rigorous methods do not provide a practical, routine monitoring approach for individual users. However, once a flare tip has been demonstrated under appropriate conditions representative of the ranges of gas stream(s) and operating pressure(s) involved, it can be considered stable and smokeless for a given application

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: John Zink Hamworthy Combustion (JZHC)
Commenter Affiliation: John Zink Hamworthy Combustion (JZHC)
Document Control Number: EPA-HQ-OAR-2010-0505-6846
Comment Excerpt Number: 8

Comment: Appropriate Methodologies to Measure Resultant Flare Destruction Efficiency

a. Test protocols similar to one utilized for multi-point ground flare (MPGF) AMEL would be suitable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Todd Mayer, Steffes Corporation
Commenter Affiliation: Steffes Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6981
Comment Excerpt Number: 7

Comment: The EPA also requests comment on the appropriate parameters to monitor to ensure continuous compliance.

Steffes response:

2. "In addition, we request information on:"
a. (1) The importance of, and assessment of flame stability;
b. (2) the importance of, and ranges of the heat content of flared gas;
c. (3) the importance and ranges of gas pressure and flare tip pressure;
d. (4) the importance of and examples of appropriate flare head design;
e. (5) a cross-country review of waste gas composition;
f. (6) and appropriate methodology to measure the resultant flare destruction efficiency.

Steffes response to the above 6 items: Steffes believes that EPA is focusing on the appropriate technical criteria that are required for the successful deployment of PAF's that would meet EPA's >98% destruction capability. However, design differences between flares can lead to different results so any prescriptive design approach should have sufficient flexibility to

accommodate innovation while still satisfying EPA's statutory charge with respect to limiting emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

Commenter Name: Sidney G. Cabbiness, Environmental Engineer
Commenter Affiliation: Zeeco, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6926
Comment Excerpt Number: 6

Comment: Appropriate Parameters to Monitor to Ensure Continuous Compliance

Many locations in the upstream/midstream oil & gas industry where pressure-assisted flares are used are unmanned locations. It is unrealistic and impractical to impose the same extensive continuous monitoring requirements that EPA has recently imposed on continuously manned facilities. The user should only need a simple parameter to demonstrate that a flare is being operated in a manner consistent with its design. Zeeco can provide design flow and pressure conditions for each flare for smokeless operation in the form of a flow vs. pressure curve. A pressure-assisted flare user can ensure the flare pilot is lit, and can monitor flare gas pressure or flow to show that the flare is operating under its intended conditions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

11.3 Closed Vent Systems

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 64

Comment: Production tanks receiving produced liquids, including crude oil, hydrocarbon condensate, produced water or mixtures thereof are generally equipped with a "thief hatch." Thief hatches, which are designated as openings to a "cover," function to provide access to the tank, for example to "gauge" the liquid level. Many tanks are equipped with spring loaded thief hatches that also function as pressure/vacuum vents to protect the integrity of the tank by avoiding excess pressure or vacuum. The spring loaded or weighted thief hatches are designed to vent to atmosphere in the event the pressure within the tank exceeds the set point pressure, in terms of ounces per square inch (osi). Tanks may also be equipped with separate pressure relief devices that may relieve pressure to atmosphere or to a control device.

In developing these regulations, EPA needs to be aware that thief hatches present a unique situation. While it is true that they may "leak," they are also intended to open in certain situations (e.g., as pressure relief). Thus, there is a technical analysis that needs to be made as to whether or not an emissions is a "leak." This is particularly true for lower throughput volume tanks. In addition, it may be difficult, due to the intermittent nature of leaks, to determine that there is in fact a leak. Thus, one might be investigating as the 15-day deadline passes (and it is important for any deadline not to commence until there is confirmation that it is a leak and not a normal, expected emission). This issue needs to be addressed in any final rule.

Thief hatches may leak as a consequence of physical or chemical degradation or fouling of the seal material, either of the vacuum or pressure seal, or both. Both weighted and spring loaded thief hatches and pressure relief devices may fail to reseat after a relief event. In any case, the "continuous impermeable barrier" standard for covers is not achievable in practice and EPA cannot establish that this standard "is achievable under the range of relevant conditions" outlined above.

EPA should define closed vent system to be consistent with definitions in NSPS Subparts VV (40 C.F.R. § 60.481) and VVa (40 C.F.R. § 60.481a) and to include thief hatches and other cover openings. The term "closed vent system" should be defined to mean "a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, access hatches, and other cover openings, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process."

Additional changes to the rule will be necessary to address the revised definition of closed vent system to include thief hatches.

Response: We disagree with the commenter that a thief hatch cannot be considered part of a continuous impermeable barrier. Section 60.5411a(b)(3) specifies that:

> Each storage vessel thief hatch shall be equipped, maintained and operated with a weighted mechanism or equivalent, to ensure that the lid remains properly seated and sealed under normal operating conditions, including such times when working, standing/breathing, and flash emissions may be generated.

Thus, under normal working conditions, the thief hatch is seated and sealed and comprises part of the continuous impermeable barrier. The thief hatch should only open when the physical integrity of the tank may be compromised. If the storage vessel and closed vent system are properly designed, then opening of the thief hatch should be a rare event. The normal flash emissions that occur from adding liquid to the storage vessel should not trigger the thief hatch.

We also note that thief hatches are considered a fugitive emissions component as defined in §60.5430a. In that definition, we clarify that devices that vent as part of normal operations are not a fugitive emissions component, but emissions from a thief hatch are considered fugitive emissions.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 67

Comment: EPA should provide operational flexibility, allowing gas/vapor to be routed to a flare or other combustion device in cases where gas/vapor cannot be routed to the pipeline or process for any reason. As proposed, 40 C.F.R. § 60.5411a(c) provides each closed vent system for storage vessel affected facility "that routes emissions to a process must be operational 95 percent of the year or greater."

Many production sites are designed and intended to primarily route produced natural gas from surface separation and/or captured vapor from storage tanks to a gas gathering system under normal circumstances. However, due to circumstances beyond the control of the facility owner/operator, access to such pipeline may be restricted or unreliable. In those cases, gas may be routed to a flare or other combustion device.

Closed vent systems that do not include flow-inducing devices and that do not have bypasses are passive in nature. Such systems are always operational. It is the control device and/or the process to which gas/vapor is routed that must be operational. To provide flexibility, EPA should specify that the process to which emissions are routed must be operational 95 percent of periods when emissions may be vented from the affected facility.

Response: In the final rule, the EPA is not finalizing the requirement that the process must be operational 95 percent of the time. The standard that owners and operators must meet is 95 percent control of emissions, either by routing to a control device or routing to a process.

Commenter Name: Urban Obie O'Brien
Commenter Affiliation: Apache Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6808
Comment Excerpt Number: 22

Comment: §60.5416a Cover and Closed Vent System Inspection Reports: Again, the recordkeeping and reporting burdens of the proposed rules are huge; and the agency has again grossly underestimated the resulting costs burdens. Apache recommends that in lieu of thousands of individual monthly inspection reports, an annual report would be sufficient that affirms the devices were operated and maintained as required. That annual report could also summarize the corrective actions taken during the reporting period.

Paragraphs (c)(1) and (2) require an inspection of each closed vent system and each cover at least once every calendar month. This section requires that operators conduct olfactory, visual and auditory inspections of each closed vent system and cover and maintain records of the inspection results.

i. Using the previously mentioned 750 affected facilities likely to be brought on line during the first year of the regulation, this requirement would necessitate approximately 9,000 inspections for closed vent systems and an additional 9,000 inspections for covers. As a result, Apache would then be required to maintain records on 18,000 inspections for the first year alone. Each year thereafter, we can expect the facility count to increase by approximately 750 facilities as production operations grow to offset natural decline. By the time we reach the end of year 5 (the prescribed time to retain records in §60.5420a(c)(6) and (7)) we will be producing 90,000 inspection reports annually and will have accumulated 270,000 reports. Again, this is untenable, inefficient, and unduly burdensome, and should be deleted or reduced significantly.

ii. In addition, visual inspections (augmented by auditory) are already routinely conducted by the wellsite operators as part of their regular inspections. VOC's, such as benzene, are known to have health impacts. Prescribing olfactory inspection protocols needlessly exacerbates this risk and may multiply it several fold.

Response: We believe that the commenter has far overestimated the number of reports that will be required for their covers and closed vent systems. First of all, the commenter has stated that the 750 facilities consist of 500 new facilities and 250 existing facilities "that become affected facilities due to tie-ins." We believe that it is unlikely that the 250 existing facilities will be storage vessels that will be modified or reconstructed such that they will be subject to the cover and closed vent system requirements. Of the remaining new "facilities," even assuming that they are all storage vessels, we believe that the commenter will take advantage of the provisions of §60.5365a(e) that allows the owner or operator to take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority when determining the PTE of the storage vessel. We have also added provisions in the final rule at §60.5365a(e)(5) clarifying that certain storage vessels used for water recycling are not affected facilities. Thus, we believe that the actual number of facilities that will be subject to the final rule will be a small fraction of the 750 facilities and the burden of the monthly cover and closed vent system inspections will not be unduly burdensome.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 68

Comment: EPA states that another approach to detecting overpressure in a closed vent system would be to require a continuous pressure monitoring device or system, located on the thief hatches, pressure relief devices and other bypasses from the closed vent system. The preamble posits anecdotally that EPA inspections have shown thief hatch pressure settings below the pressure settings of the storage tanks to which they are affixed, which results in emissions escaping from the thief hatch and not making it to the control device. We note that setting the relief pressure below the pressure rating of a tank may be done to ensure safety. As tanks age, having a safety factor is intended to ensure the long term integrity of the tank.

EPA also requests comment on the types of cost-effective pressure monitoring systems that can be utilized to ensure that the pressure settings on relief devices are not below the operating pressure in the closed vent to the control device and what types of reporting from such systems should be required. Fundamentally, EPA has not provided statistical information to support the application of a CMS. Further, it is unclear what would be learned or accomplished by such monitoring, particularly when considering the very low increments of pressure at issue and the relative costs.

The cost of a tank pressure CMS, including the capital cost of pressure transducers and other instrumentation and data acquisition hardware, installation costs, software, Supervisory Control And Data Acquisition (SCADA) integration and IT, quality assurance and quality control measures, and routine operation and maintenance costs *etc.* would be prohibitive, particularly if required over a large geographically dispersed asset with numerous tank systems. EPA must address cost considerations in pursuing its Next Generation strategy.

Vertical fixed roof tanks operate within a narrow and low pressure/vacuum range. A pressure sensing instrument would have to detect pressure (and vacuum) conditions hovering around zero pounds per square inch gauge pressure. Also, the pressure set points of spring loaded thief hatches and pressure relief devices are not precise. We are aware that Noble Energy, as part of its Consent Decree, is required to install such a system, but the performance and reliability of a tank pressure CMS is unproven in practice. The technological challenges and prohibitive cost outweighs the potential, and unproven, benefit.

Proper operation of storage vessel affected facilities in compliance with the promulgated standards representing BSER should be determined and documented by the inspection and recordkeeping regimen prescribed in the rule.

This requirement represents another point where EPA is required under the statute to take into account the cost of compliance and provide an exclusion that covers circumstances where the cost of compliance would be great and the expected emission reductions trivial.

Response: The EPA requested comment on the types of cost-effective pressure monitoring systems that can be utilized to ensure that the pressure settings on relief devices are not below the operating pressure in the closed vent to the control device and what types of reporting from such systems should be required.

The EPA received comment indicating that the cost of a tank pressure CMS, including the capital cost of pressure transducers and other instrumentation and data acquisition hardware, installation costs, software, Supervisory Control And Data Acquisition (SCADA) integration and IT, quality assurance and quality control measures, and routine operation and maintenance costs would be prohibitive. The EPA will take these comments under advisement, and is not finalizing any requirement for a pressure monitoring system at this time.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 48

Comment: EPA is considering the requirement for a continuous pressure monitoring system on thief hatches, pressure relief devices, and other bypasses from the closed vent system (P321). We estimate that the cost to purchase and install continuous pressure monitoring equipment at a single well site and tank facility will be $20,000. This cost includes five pressure monitors (two at the well head, one on each of the two oil tanks, and one on the oil/water separator bypass line), electrical system installation, piping and tank modifications, a data collector/server, and a data transmission system. If an owner/operator implemented this type of system at each of their 400 tank batteries and 2,200 well heads, the compliance cost would be approximately $15 million. Adding this type of expense onto the costs that have already been discussed would be a momentous burden for our industry. This type of project would require several years to design and implement, and could not be completed in the 60 days given for compliance.

We also have a concern about data quality and data management. Many of our well and tank battery locations are far from technology infrastructure (internet or cell service). The cost provided above only covers the cost to implement pressure monitoring for our equipment, and not to route technology infrastructure to our facilities. If communication infrastructure is not routed to our facilities, continuous monitoring will not be reliable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-7058, Excerpt 68.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 36

Comment: Additional Requirements for Closed Vent Systems Are Not Needed

In the proposed rule, EPA suggest that third party verification or continuous pressure monitoring may be needed to remedy inadequate design and sizing of closed vent systems. 80 Fed. Reg. at 56,649. Such requirements would be unnecessary. In the proposed rule, EPA appears to assume that most, if not all, closed vent systems are inadequately designed and sized and, as a result, are not meeting current compliance obligations. It is wholly inappropriate for EPA to simply assume that noncompliance is occurring and demand more oversight. Instead, EPA should rely on existing and monitoring requirements and take necessary enforcement actions for the few closed vent systems that are found to be designed inadequately. Unless these existing monitoring and enforcement mechanisms are shown to be insufficient, there is no basis to add additional compliance requirements.

In addition, the pressure settings on relief devices for closed vent systems are typically set on installation and are tailored to the specific design of each closed vent system. The regular OGI monitoring program included in EPA's proposal would cover these relief devices and alert the operator if the relief devices were not working properly or if seals were in need of replacement. As a result, GPA does not believe that any additional pressure monitoring systems are necessary for closed vent systems.

Response: We appreciate the input from this commenter and other commenters on the proposed requirement for third-party verification. After considering all the comments received on this issue, in lieu of independent third-party verification for closed vent system design, we are finalizing a qualified professional engineer certification. See section VI.H.4 of the preamble to the final rule for more information regarding this issue.

Regarding comments that in order to avoid notice and comment issues the EPA must propose regulatory language before finalizing any regulatory language, EPA disagrees. Section 307(d)(3) of the CAA states that "notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of title 5, United States Code…." There is nothing in the remainder of section 307(d) that requires EPA to publish the regulatory text. Similarly, section 553(b) of the Administrative Procedure Act (APA) does not require agencies to publish the actual regulatory text. See EMILY's List v. FEC, 362 F. Supp. 2d 43, 53 (D.D.C. 2005), where "[t]he Court notes that section 553 itself does not require the agency to publish the text of a proposed rule, since the agency is permitted to publish "either the terms or substance of the proposed rule or a description of the subjects and issues involved". For this rulemaking, EPA has provided notice and opportunity to comment for all of the specific regulatory requirements applicable to the sector and facilities covered by the rulemaking, either through proposed regulatory language or a description in the preamble. See section VIII.H.3 of the preamble to the final rule for more information regarding this issue.

Regarding the comment on pressure monitoring systems, see response to DCN EPA-HQ-OAR-2010-0505-7058, Excerpt 68.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2010-0505-6854
Comment Excerpt Number: 29

Comment: EPA has proposed separate monitoring requirements for CVS and fugitive emission components and CVS are subject to both due to the inclusion of CVS in the definition of fugitive emissions component. This is unnecessarily duplicative. CVS, thief hatches, and storage vessel covers do not belong in the fugitive emission components definition since they have their own unique monitoring requirements being proposed. A definition for CVS is needed in this rule to distinguish it from fugitive emission components. PAW recommends incorporating the definition of CVS from Subpart W and also include thief hatches and storage vessel covers in the CVS definition.

CVS should be subject to one or the other but not both monitoring programs. Thief hatches in particular should only be subject to CVS requirements because thief hatch and storage vessel cover leaks are irrelevant for storage vessels with no emissions control or other CVS components. PAWs recommendation solution is to adopt what is recommended in API comments. That is, instead of complying with applicable requirements in §60.5416a, CVS should be subject to monitoring requirements in §60.5397a. Whether a site is subject to CVS monitoring requirements only, fugitive emission component monitoring only, or a combination of both, a single method of monitoring for leaks is applicable to any or all of these situations.

Response: The EPA agrees with the commenter that the proposed rule did not clearly indicate our intent with respect to potential overlap in monitoring requirements between §60.5397a and §60.5411a. Our intent was that covers and closed vent systems subject to §60.5411a would not also be subject to the fugitive emissions monitoring requirements of §60.5397a. However, we did not clearly convey this intent because we included closed vent systems in the definition of "fugitive emissions component" in §60.5430a. Thus, it appeared that all closed vent systems would be considered fugitive emissions components subject to §60.5397a. This was clearly not our intent because subjecting closed vent system to two simultaneous monitoring requirements is not reasonable. Therefore, in the final rule we have amended the definition of fugitive emissions component as follows: "…covers and closed vent systems not subject to §60.5411a…". We believe this change clearly indicates our intent that covers and closed vent systems are subject to §60.5397a only when they are not otherwise regulated under §60.5411a.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 44

Comment: There is Unnecessary Overlap and Redundancy Between the Cover and Closed Vent System and Fugitive Emission Requirements

EPA proposes fugitive monitoring like requirements for closed vent systems, but also includes closed vent systems in the definition of Fugitive Emission Components. This results in CVS being subject to both closed vent system and fugitive emission component monitoring requirements in §60.5397a and §60.5416a. This creates a situation which is unnecessarily duplicative and redundant. Specifically, EPA has required both optical gas imaging monitoring for the tank cover and the closed vent systems under §60.5397a, as well the following under §60.5416a:

- Annual Method 21 (M21) monitoring and visual inspections for closed vent systems for centrifugal compressors and pneumatic pumps, and
- Monthly olfactory, visual, and auditory inspections for storage vessel covers and closed vent systems.

This could result in as many as three different leak detection programs at a single facility.

To avoid this conflict, API provides recommendations that will eliminate this overlap while still ensuring that emissions from leaks from closed vent system components are minimized. The problem and API's recommendations are discussed in detail in Sections 26.0.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6854, Excerpt 29.

Commenter Name: William C. Allison
Commenter Affiliation: Colorado Department of Public Health and Environment
Document Control Number: EPA-HQ-OAR-2010-0505-6876
Comment Excerpt Number: 21

Comment: Closed vent system and control device design

EPA is considering several third-party verification programs, including verification of closed vent system design, control device design and installation, and IR camera fugitives monitoring. The Division supports a program that would remedy the inadequate design, sizing, and installation of the closed vent system and control device. As EPA noted, inspection campaigns have found a high rate of venting from storage tank thief hatches and other parts of the control system. Following these campaigns, EPA issued a Compliance Alert discussing the engineering and maintenance practices causing the compliance concerns and describing how operators can properly design, size, operate, and maintain their vapor control systems to control emissions from storage vessels. Colorado's regulations similarly require that all condensate collection, storage, processing, and handling operations be designed, operated, and maintained to minimize leakage to the atmosphere. Even with this regulatory standard, the Division has found high levels of venting from storage vessels. Therefore, the Division supports EPA's efforts to require adequate closed vent system and control device design, operation, and maintenance.

Response: The EPA thanks the commenter for their support of the proposed third-party verification programs. As discussed in section VIII.H.2 of the preamble to the final rule, the EPA has not finalized third-party verification for closed vent system designs.

11.4 Third-Party Verification

Commenter Name: Jessica Bassett, Director of Regulatory Projects, Environmental Law Project
Commenter Affiliation: University of Pennsylvania Law School
Document Control Number: EPA-HQ-OAR-2010-0505-6247
Comment Excerpt Number: 3

Comment: Independent Third-Party Verification

The EPA should adopt third-party verification in regulation of closed vent systems and control device design and installation. In keeping with the NextGen initiative, closed vent system and control device design and installation should be verified by an independent third-party via a licensed Professional Engineer (PE). This method of third-party verification promotes resource efficiency and creates a less combative relationship between regulator and regulated entity.

The term "third-party" here refers to an external private auditor or consultant who is paid by the regulated entity. To qualify as an independent third-party, the PE should provide their findings and reports to the EPA and the regulated business simultaneously. If the third-party is allowed to provide the regulated business with its findings prior to submission to the EPA, it should be considered a consultant to that company and not a regulatory agent. Third-party verification represents a partial privatization of the public function of enforcing regulatory law. In this case, the private party would take over the EPA's role as the direct point of contact for the specific regulation. This is a form of "public-private governance" in which private actors play critical roles in the regulatory process.

EPA studies have shown that improperly designed and implemented closed vent systems can result in harmful excess emissions. To meet their regulatory goals, it makes sense to monitor these systems. However, efficient monitoring of all systems may be quite resource-intensive for the agency because sufficient personnel and testing would be needed. It is an unfortunate reality that, while regulatory agencies are burdened with the duty to enforce the law on the ground, they must also balance effective regulation with variations in annual operating budgets reliant on government allocation. Using financial and personnel resources as efficiently as possible is not just a question of responsible use of taxpayer money, but also paramount for the EPA to continue to deliver adequate regulation across budget cycles.

Maximizing the efficient use of these resources addresses an immediate need. The House Appropriations Committee voted on cuts to the EPA's budget as recently as June of 2015. With the potential of a smaller budget, the EPA must be able to do more with less. By shifting the role of direct regulation to independent PEs, the EPA would serve in a more supervisory role and less as a direct point of contact to the regulated entity. This allows fewer EPA employees to regulate more of the country. The cost of these tests would be pushed onto the regulated business, allowing the EPA to manage its regulatory duties from afar at little cost.

Another advantage is that introducing a third-party shifts the liability of a mistake from the EPA's inspectors to that third-party. The risk of liability from an erroneous report would be taken by each PE in accepting the job. As a licensed professional, the PE has a strong

incentive to ensure accurate and honest reporting. Dishonesty or careless reporting could risk the PE's license and, with it, his or her career.

The benefits of this proposed regulation are not simply one-sided. As private parties lack the sanctioning power of a governmental regulator, third-party verifiers are likely to approach the regulated entity in a cooperative, peer-to-peer manner that may induce greater information sharing. Businesses are free to choose third-party firms that they are comfortable working with. This creates a level of ownership and cooperative participation in the act of regulation rather than an adversarial system between regulator and business.

Finally, the EPA should not limit the regulation to the mere design of the control system. It is essential that these systems are installed correctly to ensure effective use. It is one thing to design a system properly; it is something else to implement it in accordance with the design. Since the EPA will be delegating its regulatory authority to independent third parties, it should be able to accomplish this goal without the need for extra personnel. Thus, with very little resource expense on the part of the agency, the EPA will be able to ensure the correct design and installation of closed vent systems across the country.

Response: The EPA thanks the commenters for their support for implementing a third-party verification program and the additional information provided in the comments. As discussed in section VIII.H.2 of the preamble to the final rule, the EPA has not finalized third-party verification for closed vent system designs.

Commenter Name: Jessica Bassett, Director of Regulatory Projects, Environmental Law Project
Commenter Affiliation: University of Pennsylvania Law School
Document Control Number: EPA-HQ-OAR-2010-0505-6247
Comment Excerpt Number: 5

Comment: Fugitives Emission Verification

Next Generation Compliance and Rule Effectiveness: Fugitive Emission Verification

Fugitive emissions—leaks from static components and seals that are designed not to release any gas—are responsible for 31% of methane emissions in the oil and gas industry. Efficient monitoring of fugitive emissions is critical to effectively reduce methane emissions under the proposed rule; indeed, leak detection and repair (LDAR) programs can reduce methane pollution by an estimated 1,700,000 to 1,800,000 metric tons per year." EPA is proposing to follow the lead of Colorado and other states and use optical gas imaging (OGI) as a low cost way to find leaks. Here, we will specifically address EPA's proposed audit program to verify fugitive emissions monitoring.

EPA Should Not Alter its Proposed Auditing System for Fugitive Emissions

While third-party auditors certainly have their advantages (such as those noted above), there are disadvantages to using them, as well. We support EPA's proposed safeguards to ensure a fair auditing system as to fugitive emission verification. The practice of third-party auditors being hired and paid by the parties they are auditing is widespread in a variety of industries; yet the practice creates an inherent conflict of interest for auditors. Whenever the facility or firm being audited is responsible for hiring and paying the auditor, there is almost by definition a conflict between the auditor's financial interest and their professional obligation to protect the public through objective auditing. In order to attract or maintain paying clients, "third-party auditors have incentives to shade or falsify their reports, which may corrupt information provision and, in turn, undermine regulation." In the food industry, for example, auditing in which third-party auditors are paid by the entities that they audit is widespread. Since auditors are competing for business from food suppliers—who often are interested in getting the cheapest and quickest audit possible—they have a financial incentive to reduce the cost and burden of audits, in part by cutting corners.

In addition to being shaped by financial conflicts of interest, auditors' decisions are also shaped by social factors, including an auditor's experience, professional training, and repeated professional interactions with those they audit. Research into the influence of social institutions and relationships on private supply chain auditors has suggested that "auditors who repeatedly visit an audited entity are likely to be subject to cognitive biases and social pressures that will influence which violations they detect and cite." In addition, requiring outside certification of auditors will not necessarily address the central conflict of interest issue created by the financial relationship: auditors may simply seek out the cheapest (and often least rigorous) certification available in order to keep their costs down.

However, the financial incentive structure can be altered to encourage more accurate audits. In a study of environmental audits of industrial plants in Gujurat, India, a package of reforms intended to change the market incentive, including randomly assigning auditors to power plants and paying a bonus for accurate reporting, resulted in more accurate audits.

EPA's proposal is for facilities to be responsible for determining and documenting that their auditors are independent, as long as they adhere to a number of criteria. These include requiring that the auditor has not had any professional relationship with the site in the previous three years, requiring that the owners and operators of the site not provide any future employment to the auditor for at least three years after the submission of the final audit report, and requiring auditors to sign a conflict of interest statement.

We believe that these safeguards will go a long way towards minimizing auditor bias. We strongly encourage EPA to preserve this proposed system and not to incorporate into the final rule any of the proposed options that would increase owner or operator flexibility at the expense of introducing more bias into the audit program (including allowing auditors with some potential conflicts of interest or letting a certified employee of the site conduct the audit). Allowing owners and operators to verify the competency of their own auditors already gives them a degree of flexibility. Given the widespread nature of bias in third-party auditing and the importance of regular auditing to the effectiveness of an OGI monitoring system for fugitive emissions, we strongly encourage EPA not to alter their proposed auditing system.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6247, Excerpt 3.

Commenter Name: Jessica Bassett, Director of Regulatory Projects, Environmental Law Project
Commenter Affiliation: University of Pennsylvania Law School
Document Control Number: EPA-HQ-OAR-2010-0505-6247
Comment Excerpt Number: 8

Comment: Third-Party Information Reporting

Third-party information reporting is an effective way to increase regulatory compliance while reducing administrative costs to the EPA. In addition to the steps it has already taken in implementing this tool, we urge the EPA to require third-party manufacturers to include serial numbers in their reporting. Further, we recommend that some performance testing still be required for owners and operators purchasing control devices under this scheme.

As a matter of general policy, third-party information reporting is incredibly effective. Most notably, the Internal Revenue Service uses third-party information reporting to ensure tax compliance. The National Tax Foundation has found that tax evasion is cut in half for income completely reported by third parties (typically employers), as opposed to income only partially reported by third parties. In Denmark, tax evasion is virtually zero with third-party reporting.

This type of compliance assurance is so effective, presumably, because individuals and organizations are much more likely to comply with the law when they feel they are being observed and held accountable. Recent social science research has confirmed that, in virtually every scenario imaginable, people's behavior changes when they feel they're being observed, typically in compliance to what the observer expects.

In terms of regulation, inspection schemes, on the whole, increase compliance. Yearly inspections by the EPA of the pulp and paper industry cut non-compliance rates in half. Furthermore, companies complied with those EPA regulations much more than industry complies with Occupational Safety & Health Administration regulations. This gap is explained by differences in the regularity of inspections.

In short, inspections work. The general trend in regulation is that an increase in inspections causes an increase in compliance. Over time, an increase in compliance renders extra inspection superfluous, and so increased compliance leads to decreased inspection. In the long run, then, increased inspection—or increased observation by the regulatory body—can decrease costs for regulators.

Third-party information reporting, however, decreases costs to regulators on the front end, yielding the benefits of traditional inspection regimes without requiring a large up-front cost. In that sense, it is a clear benefit to the EPA, which can divert its limited resources towards other initiatives.

Furthermore, third-party information reporting will accomplish these benefits without imposing undue burdens on product manufacturers. The type of post card reporting envisioned by this proposed rule would represent a miniscule cost to these businesses.

The issue remains, however, of how to match the granularity of manufacturers' reports with the information provided by owners and operators. We propose requiring manufacturers to report individual serial numbers (or other numbers that individually identify products) to the EPA. This would obviously entail a more thorough (and thus time-consuming) method of information reporting; however, businesses will likely be able to implement systems to include serial number information easily and efficiently. This type of reporting may even dovetail with the product inventory that manufacturers already take.

The EPA has expressed concern that owners and operators will purchase control devices and install them without conducting performance tests. The EPA certainly wants to encourage use of a third-party information reporting structure and could do so by requiring fewer performance tests. They need not, however, make performance testing purely optional. We submit that the EPA should reduce the number of required performance tests to owners and operators who install approved control devices with complementary reporting by manufacturers.

Given the cost-savings and compliance-increasing benefits of third-party reporting, we encourage the EPA to consider where this type of regulation regime could be used in other parts of the New Source Performance Standards. Third-party reporting works particularly well for control devices because it involves the purchase of products than can be easily tracked by a third-party. It may not fit as well in the other requirements being proposed. Nevertheless, the EPA should continue to seek opportunities for using this compliance-verification method, particularly as it looks to implement NextGen regulatory systems.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6247, Excerpt 3.

Commenter Name: Henry Robertson, Energy Chair / Staff Attorney
Commenter Affiliation: Missouri Sierra Club / Great Rivers Environmental Law Center
Document Control Number: EPA-HQ-OAR-2010-0505-6913
Comment Excerpt Number: 6

Comment: The Missouri Chapter supports next-generation compliance standards, including third party auditors to certify compliance and submit their reports directly to EPA, and professional engineer's certification that vent systems meet a no venting standard.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6247, Excerpt 3.

Commenter Name: Richard A. Hyde, P.E., Executive Director
Commenter Affiliation: Texas Commission of Environmental Quality (TCEQ)

Document Control Number: EPA-HQ-OAR-2010-0505-6753
Comment Excerpt Number: 3

Comment: Independent third party verification that may include professional engineering (PE) certification of the design and installation of closed vent systems and control devices. The TCEQ is generally supportive of the use of PE evaluation and knowledgeable individuals or firms for certification, completion of tasks, and evaluation of performance in support of permitting and regulatory actions in Texas. However, any use of these assets to supplement and support the compliance effort should be at the discretion of the company concerned, and should not be a mandatory requirement.

In addition, complex tasks such as the certification of closed vent systems, control devices design and installation, and third party testing and/or evaluation of control devices involve an evaluation where there are many possible answers considering the wide variety of equipment and operating conditions. The use of third parties to implement a review and certification program could actually increase the burden on state regulatory agencies such as the TCEQ and would increase the regulatory and economic burden on the oil and gas industry. This regulatory and economic burden will be magnified for small oil and gas companies operating under negative or razor thin cash flow in the current low prices for oil and gas. Therefore, the TCEQ opposes any additional, mandatory regulatory layer composed of third parties to ensure compliance.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Richard A. Hyde, P.E., Executive Director
Commenter Affiliation: Texas Commission of Environmental Quality (TCEQ)
Document Control Number: EPA-HQ-OAR-2010-0505-6753
Comment Excerpt Number: 5

Comment: Third-party reporting. Similar to our comments above relating to third-party verification, TCEQ is not opposed to the EPA allowing voluntary, independent third-party reporting programs as an additional resource to support compliance. This voluntary use of third-party reporting should be a decision of the companies involved. TCEQ does not support an additional, mandatory regulatory layer of third parties to support compliance reporting.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 61

Comment: Secondly, the oil and gas industry should not be the primary parties responsible for inspection and monitoring of their own infrastructure. They're not to be trusted with the health and welfare of the citizens, especially when it pertains to impacting their own profits. Similarly, several state regulatory agencies have also shown that they are also not capable or able to independently conduct industry monitoring and compliance. This is definitely an area instead for the federal government. And these changes, I think, would significantly enhance the federal rule. I thank you for the opportunity to comment.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Lauren Pagel and Aaron Mintzes
Commenter Affiliation: Earthworks
Document Control Number: EPA-HQ-OAR-2010-0505-6934
Comment Excerpt Number: 2

Comment: We submit these comments on behalf Earthworks in regards to the Next Generation Compliance and Rule Effectiveness: Independent Third-Party Verification 80 FR 56648.

We urge EPA to include a citizen-monitoring and reporting component to the leak detection and repair (LDAR) program outlined in the proposed rule as part of a third-party verification system. Citizen monitoring can add tremendous value – easing the burden on the industry, providing valuable information to state regulators and EPA, while also aiding compliance with the rule.

Optical gas imaging (OGI) technology, that makes invisible pollution visible, has made its way into the hands of non-profits and citizens. These citizens are trained how to properly use the technology, receiving the same certifications, and attending the same training courses as oil and gas operators. EPA can take advantage of these additional eyes on the ground near oil and gas facilities to ensure more leaks are detected so that industry can quickly repair them.

It is clear from EPA's creation of programs like Air Sensor Toolbox for Citizen Scientists and EPA's Community Air Monitoring Training Event that EPA sees value in citizens participating in monitoring local air quality where they live, work and play. In promoting these and similar efforts, EPA has also linked citizen monitoring with effective compliance and enforcement, since regulators can identify pollution or violations based on information submitted by citizens.

A citizen-monitoring program using OGI technology allows well-trained citizens to act as third party to collect data and pass that data onto EPA. In turn, EPA can follow up with the operator and ensure that leaks and related problems are detected more quickly—thereby reducing the release of harmful volatile organic compounds (VOCs) and methane emissions from oil and gas facilities.

Third-party citizen monitoring should augment, not replace, the monitoring conducted by industry under this rule. This approach will result in more leaks detected and repaired, creating

greater cost savings for the industry by allowing them to capture and sell more product. It will also ease EPA's obligations and help with third-party verification of leak detection and repair.

We recommend EPA include the following citizen monitoring program components:

A) EPA creates a simple citizen monitoring web form that allows citizens with access to OGI technology to upload emissions surveys taken from the field. This form should contain nearly identical information to what the industry will submit to EPA as part of their LDAR compliance under this rule:

1. Date of the survey.
2. Beginning and end time of the survey.
3. Name of camera operator(s) performing survey.
4. Training experience of the operator.
5. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
6. The location of the survey, including latitude and longitude coordinates.
7. A video(s) or digital image(s) of the leak, date/time stamped.

B) EPA shall determine within 5 days of receiving the completed web form and data whether the information documented therein requires LDAR under the rule.

C) If EPA determines LDAR is necessary, EPA shall within 5 days notify the facility owner and/or operator in writing, including all survey information submitted to them via the citizen monitoring web form.

D) The facility owner and/or operator has 15 days from receipt of the written notification described in paragraph C to perform LDAR and/or otherwise come in to compliance with this rule.

E) Failure to comply with paragraph D will result, at EPA's discretion, in fines of at least $15,000 per day.

In sum, allowing trained citizen monitors to assist in the leak detection process will help ensure the effectiveness of the LDAR provisions of the rule, supplementing the surveys that EPA will require the industry to conduct. Third-party citizen monitoring can relieve the burden on the industry by helping find leaks, allowing the industry to capture more natural gas to bring to market, and support EPA's compliance and enforcement activities related to methane emission reduction.

A citizen-monitoring program can also increase the benefits to public health and the climate by finding more emissions in more places and alerting industry to those leaks for quick and timely repair. For these reasons, EPA should ensure that a citizen monitoring and reporting component be part of the third-party verification system in the final rule. Thank you for accepting our comments.

Response: The EPA does not believe that it is necessary for the final rule to include a mechanism for citizen complaints. State and local agencies already provide means for submitting and responding to complaints. In addition, citizens may lodge complaints about potential violations of environmental laws directly with the EPA at https://www.epa.gov/home/forms/contact-epa.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 8

Comment: And finally, I have a suggestion. Why not move toward crowd sourcing monitoring of emissions from drilling? In our area, there are hundreds, you know, and maybe thousands of drill sites spread across many square miles of forest. And that's true across forests and parks and cities and neighborhoods all over Pennsylvania. The local people know these sites and they care. Why not make basic testing equipment available for those on the ground? And then the EPA could move more quickly to identify problems and focus on -- you know, focus enforcement resources where they are most needed. Thank you.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6934, Excerpt 2.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 65

Comment: Though not specifically included in the Proposed NSPS OOOOa Rule text, EPA seeks comment on establishing a third-party verification program. EPA generally describes this third-party verification as "when an independent third-party verifies to a regulatory agency that a regulated entity is meeting one or more of its compliance obligations." EPA indicates that third-party compliance monitoring and reporting may further improve compliance—beyond any required monitoring and reporting by the regulated entity. Despite this broad statement, EPA provides no information or indication that (1) existing requirements are not resulting in appropriate and sufficient compliance; (2) other commonly used mechanisms, such as reporting and certification (such as the self-certification requirements in NSPS Subparts KKK and LLL), are not resulting in appropriate and sufficient compliance; (3) third-party verification would in fact improve compliance; or (4) that EPA has adequately considered the costs versus benefits of such a requirement.

Despite seeking comment on use of third-party verifiers, EPA does not provide specific rule language regarding the components of any third-party verification program and instead points the regulated community and other interested parties to a range of components or design features discussed in a variety of articles, rules and programs—articles, rules and programs unrelated to the Clean Air Act. It would be inappropriate for EPA to adopt any third-party verification program on the basis of this very preliminary and unspecific description of potential components of a third-party verification program.

Furthermore, EPA's unsupported notion that third-party verification "may" improve compliance, without further analysis and support, does not justify the extensive costs associated with such compliance—costs that Kinder Morgan notes EPA did not even attempt to quantify or evaluate in its Regulatory Impact Analysis or proposed rule. EPA indicates it is considering third-party verification (and a broad range of design features related to such third-party verification) for (1) evaluation of the closed vent system design; and (2) the IR camera fugitives monitoring program. We note that EPA described the potential IR camera fugitives monitoring program in significant detail as a mandatory audit program to be implemented by the regulated entity, but that requires use of third-party consultants to complete. Many of the comments and concerns raised below regarding third-party verification apply to that fugitives monitoring program; however, Kinder Morgan also provides other and more specific concerns regarding the fugitive emission verification program in Section V(G)(6)(d) below.

In addition to the specific concerns stated above, Kinder Morgan strongly opposes the use of third-party verification to assure compliance with the proposed Subpart OOOOa, and urges EPA not to include such a requirement in the final rule. Such a requirement (1) results in a significant additional cost burden for operators; (2) raises technical and operational complexities, including inefficiencies and uncertainty associated with an additional layer of management and availability of services; and (3) unnecessarily requires the development and implementation of a new program to implement the third-party verification. As noted above, such a costly requirement would be unprecedented and does not appear to respond to any clear need. In fact, we are not aware of any other EPA NSPS program that requires third-party verification of compliance, and EPA has not presented any justification for introducing such a costly requirement for the oil and natural gas sector.

As a general matter, under EPA's proposed third-party verification program, the third-party reviewers would be "competent, independent and accredited. . . ." EPA both overestimates the availability of consultants to carry out these verifications but also overestimates the qualifications of the consultants. Based on Kinder Morgan's direct experience in seeking to engage qualified outside contractors, particularly for fugitive emissions and leak detection purposes, regulated entities would face a shortage of qualified consultants available to carry out the verification. Recent voluntary auditing and auditing associated with third-party GHG inventory verification has demonstrated that third party consultants are often initially ill-equipped to conduct the audits, lack training and do not understand the sources or industry being reviewed. This is especially likely to be the case given that EPA has not previously required third party verification for any of its regulatory programs. Importantly, given the dearth of qualified consultants, potential conflicts of interest could arise for numerous reasons, including those

associated with payment of services, desires for extended projects (i.e., revenue) and potential ulterior motives of third party verifiers.

By way of example, in its "Fugitive Emissions Verification" program—and as discussed in further detail in Section V(G)(6)(d), below—EPA would require companies implement an audit program, conducted by an independent, third-party auditor, related to the collection of fugitive emissions components at well sites and compressor stations. As a part of this audit program, EPA proposes that to ensure the "independence of the auditor," EPA would require the following:

1. The auditor and its personnel must not have conducted past research, development, design, construction services, or consulting for the owner or operator within the last 3 years;
2. The auditor and its personnel must not provide other business or consulting services to the owner or operator, including advice or assistance to implement the findings or recommendations in the Audit report, for a period of at least 3 years following the Auditor's submittal of the final Audit report; and
3. All auditor personnel who conduct or otherwise participate in the audit must sign and date a conflict of interest statement attesting the personnel have met and followed the auditors' policies and procedures for competence, impartiality, judgment, and operational integrity when auditing under this section; and must receive no financial benefit from the outcome of the Audit, apart from payment for the auditing services themselves.

Such requirements would be unreasonably onerous and eliminate third-party, independent auditors and their personnel for three-years at a time. In practice, these restrictions would prevent the use of consultants with actual knowledge and experience with a particular entity's facilities (and thus often the best-suited to understand and evaluate the facilities). Additionally, because not enough consultants have the relevant expertise and familiarity with these programs, (either from conducting the necessary monitoring or verifying the monitoring that was conducted) companies will be faced with a shortage of both consultants to assist with the monitoring and consultants to assist with the verification. Importantly, as written, the Proposed NSPS OOOOa Rule would appear to require a different third party verifier every year on a three-year rolling basis. Again, there simply are not enough qualified consultants to conduct this analysis.

The restrictions in the rule further prevent companies like Kinder Morgan from using and identifying the best consultants in order to conduct the monitoring accurately and completely in the first place. By way of a hypothetical example, if Kinder Morgan used a third party verifier and that third party verifier identified significant areas not completed or conducted by Kinder Morgan's consultants, Kinder Morgan would be faced with a question of whether to hire a new consultant with the next year's monitoring (knowing that it had not conducted the monitoring appropriately) or finding another new consultant (whose expertise and accuracy would also be untested). Kinder Morgan would be precluded from using the third party verifier (who may well be the most qualified) the following year (or for any of the next three years) in order to ensure that the monitoring is conducted accurately and completely in the first place. The point of any audit program is to ensure that the appropriate monitoring and analysis is being conducted—not

to create more paperwork and costs. As proposed, the audit program and third party verification program would not assist in these primary goals.

In addition to the above concerns, third party verification raises significant confidential business information concerns as well as questions regarding legal ramifications regarding the responsibilities of operators and the responsibilities of third party verifiers. Importantly, EPA acknowledges that EPA would need to establish mechanisms to ensure regular and effective oversight of third-party reviewers by the EPA and/or states and indicates that such mechanisms for oversight may include public disclosure of information concerning the third parties and their performance and determinations, such as licensing or registration. Because EPA has not even demonstrated the gap or failing that third-party verification would be addressing, the adoption of an entirely new regime—to be implemented by EPA and states—that requires licensing and registration of third party consultants has absolutely no justification.

Ironically, with respect to the GHG Reporting Program (applicable to many of these same facilities), EPA similarly proposed a third-party verification of the GHG reports and then declined to require such a verification program in its final rule. EPA reviewed all of the comments submitted and completed an analysis of the third-party verification proposal—concluding that for a national program involving significant reporting such as the GHG Reporting Program (and like the Proposed NSPS OOOOa Rule), third-party verification was not the preferred approach. Specifically, EPA expressed concerns that: (1) it would require EPA to establish third-party verification protocols; (2) develop a system to qualify and accredit third party verifiers; and (3) to develop and administer a process to ensure verifiers do not have conflicts of interest. Additionally, EPA, after thorough analysis, agreed with the significant costs associated with third-party verification—particularly given the significant number of reporters on a national and multiple facility basis. While Kinder Morgan believes that this 42 million dollar estimate is low, it is still significant and EPA has provided no basis for revisiting a third-party verification approach for a similarly burdensome, problematic, and complex program and all of EPA's prior concerns regarding use of third-party verification remain true with respect to the Proposed NSPS OOOOa Rule.

In sum, for all the reasons stated above, using third party consultants for Subpart OOOOa compliance verification is unnecessary and would add complexity and considerable costs to compliance. Compliance assurance and certification should be the responsibility of EPA or delegated state agencies with cooperation and participation by the regulated entity. EPA should not (and legally cannot) require third party verification in the final version of Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 22

Comment: One certainty emerges from the Agency's discussion of next-gen options: The implementation of next generation approaches the Agency outlines in the proposal preamble would be extremely expensive, and mandatory nationwide requirements would cause an operational and economic disadvantage for operators and impairment to economic development. Nonetheless, EPA has failed to include these costs in its cost-benefit analysis for the rulemaking. Furthermore, EPA presumes, without support, that third-party audits will improve compliance. EPA cannot drop these costly and onerous requirements into the rule without additional opportunity for notice and comment regarding the associated costs and impacts.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36. Concerning the costs incurred under the Next Generation compliance provisions, in both the proposed and final rules we provided an estimate of compliance costs, which included the Next Generation provisions. These estimates are presented in the Support Statements for both the proposed and final rules, which is available in the docket. We note that in response to this and other comments that we did not include all relevant costs in the Support Statement, we revised several aspects of the Support Statement burden estimate to reflect the requirements in the final rule. See also section X.B of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Laredo Petroleum
Commenter Affiliation: Laredo Petroleum
Document Control Number: EPA-HQ-OAR-2010-0505-6474
Comment Excerpt Number: 23

Comment: The requirement of Third-Party verification of fugitive monitoring, referenced on page 56648, column 2, under section X. A. Independent Third-Party Verification, is an additional cost that does not seem to be considered in the overall costs of the rule. Has EPA determined the availability of companies to provide this service and what that cost is expected to be for a small oil company with 100-300 employees?

Response: See response to EPA-HQ-OAR-2010-0505-7058, Excerpt 22. Based on comments we received from equipment suppliers and contractors, we believe there is an ample supply of equipment and personnel to carry out the requirements of the final rule.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 50

Comment: EPA's Logic on Requiring Third-Party Verification of The Adequate Design of Closed Vent Systems is Flawed and Such A Requirement is Unnecessary

EPA requests comments to whether they should specify criteria by which a professional engineer (PE) might verify that a closed vent system is designed to accommodate all streams routed to the facility's control system, or whether they might cite to current engineering codes that produce the same outcome.

The need for third-party review of well-pad designs is unnecessary if EPA believes that the proposed rule language is sufficiently clear. Further, API believe EPA could exceed its CAA authority under 111(b)(5) and (h) if such a requirement were to be finalized. The oil and natural gas industry regularly designs and builds some of the most sophisticated engineered systems in use anywhere. As such, the value derived from a third-party verification of system design would seem to only be to provide an extension of EPA's manpower and expertise. As noted above, such a requirement would run afoul of the Anti-Deficiency Act.

Oil and natural gas company engineering staff, with experience in the oil and natural gas industry and emissions control systems, and many with PE registration, are able to design systems effectively. This is especially true for modern hydraulically fractured shale oil and natural gas facilities, which are very different to the small single vertical well installations that dominated the industry in years past.

In addition to the above issues, the implementation of a third-party verification system would be complicated by the fact that any validation step would only have potential utility if it occurred prior to finalizing design and equipment construction. Specifically, any validation would need to take place prior to any required air permit applications are developed, adding time to what can already be a long process.

EPA should not attempt to expand any NSPS regulations by regulating the process or mechanical design of storage vessels or the closed vent systems through the use of third-party reviews of control devices or vapor recovery systems. Owners and operators are responsible for designing process equipment based on individual site process conditions and safety considerations. It would be a massive undertaking for EPA to attempt to write regulations regarding the specific "proper" design of storage vessels and closed vent systems. It is doubtful if EPA could provide enough flexibility in process and mechanical design of equipment regulations to cover all the unique process conditions at individual facilities.

Also, EPA has failed to take into consideration the availability of enough qualified consultants to perform process design analysis and compliance auditing. It is one thing to require third-party contracting, but quite another to find qualified contractors. EPA's proposal to limit perceived conflicts of interests would further shrink this limited pool of qualified contractors.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC

Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 44

Comment: EPA would like to establish a third-party audit and verification system that is independent from the regulated parties. Page 316 states that this system "should improve compliance". We believe that third-party audit and verifications should be available as an option for compliance activities, but should not be required for regulated parties. If the regulated parties have sufficient staffing to meet EPA's requirements, then the third party auditing / verification systems should not be required because they may be redundant and only increase cost. If obligated parties do not have sufficient staff or desire to have a third party perform auditing / verification services by certified third-party companies, then the results should be considered acceptable by EPA.

We have seen that a third-party company structure is not a guarantee to improve compliance. A large scale example of this is the false Renewable Identification Numbers (RINs) sold for Renewable Fuels Standard (RFS) compliance. Biofuels companies (considered a third party in the fuels supply chain because they are not obligated parties) sold more than $60 million in false RINs to obligated parties (fuels producers) to meet compliance requirements. The outcome of this event was that the obligated parties (fuel producers) were fined by EPA for not meeting their compliance requirements and the obligated parties were also required to purchase the required number of RINs to meet compliance requirements. EPA also implemented a Quality Assurance Program (QAP); which resulted in higher cost RINs. Higher compliance costs are ultimately passed on to the end user, which are American citizens as fuel consumers. The upstream segment is not able to pass compliance costs on, which only increases our operating costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Laredo Petroleum
Commenter Affiliation: Laredo Petroleum
Document Control Number: EPA-HQ-OAR-2010-0505-6474
Comment Excerpt Number: 24

Comment: The requirement of Third-Party verification, referenced on page 56648, column 2, under section X. A. Independent Third-Party Verification, creates significant amounts of expense and paperwork without providing additional benefits.

Third-Party verification, referenced on page 56648, column 2, under section X. A. Independent Third-Party Verification, adds another layer of administrative work and costs to comply with, detracting from compliance with rules that actually reduce emissions at locations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 33

Comment: While EPA has suggested including third-party audits as a way to ensure better compliance, in our experience these requirements can often have the opposite effect. When companies know that an outsider will come in and perform the audit, it is tempting to begin to see those compliance issues as "someone else's job." By contrast, when an operator is responsible for determining the best way to ensure compliance, the company and its personnel are more likely to take ownership of the problem and work towards creative solutions. We think that empowering operators to manage these issue will actually result in better monitoring programs, uniquely tailored to their specific operations. As a result, we are opposed to a requirement to conduct mandatory third-party audits.

Given these shortcomings with using third-party auditors, such a requirement simply cannot justify the additional financial burden that it would place on operators. Based on its own experience with other environmental air audit programs, Enterprise estimates that it would cost operators between $8,000 to $15,000 per audit, per facility, to use third-party auditors. As Enterprise as repeatedly noted, operators in this segment of the industry often have many small facilities, meaning that these third-party audit costs can quickly add up into a meaningful compliance expense.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: James Martin
Commenter Affiliation: Noble Energy
Document Control Number: EPA-HQ-OAR-2010-0505-6852
Comment Excerpt Number: 17

Comment: The preamble to the proposed rule requests comment on whether the agency should require third-party verification of closed vent systems and control device design and implementation. Noble has carefully considered this inquiry and has determined that third-party verification would unreasonably add costs without providing measureable environmental benefits. Noble urges the agency not to pursue this option. Requiring a professional engineer certification of a closed vent system and control device design would introduce significant added costs and delay. Operators would be forced to compete for the services of a small universe of professional engineers qualified to evaluate these systems. As Noble and other companies move forward, they will be designing and installing hundreds, and eventually thousands of these systems and devices; the limited supply of qualified personnel to certify their design and installation would drive up costs and delay. Yet EPA has provided no rationale that this new layer of review would provide any environmental benefit over and above that provided by the requirement that a RO certifies all reports to EPA.

In the preamble, EPA also sought comment on an audit program of the collection of fugitive emissions components at well sites and compressor stations. Noble finds this option equally troubling. This proposal would create a complex bureaucratic scheme with no measureable environmental benefits. EPA would have to create this auditing program from scratch, including a set of objective standards (an almost impossible task given the enormous variability in facilities operating in different fields and basins). It would then have to develop some way to ensure the auditor's independence, while also ensuring the auditor's competence. To ensure independence, the agency posited that an auditor could not have "conducted past research, development, design, construction services, or consulting services for the owner or operator within the last three years. Noble submits that finding qualified auditors who could meet that measure of independence would yield a null set. EPA also suggested that both the auditors and the operator would be required to sign supporting certifications. However, EPA did not indicate what an operator would be certifying to, if the auditor truly were independent. Neither did EPA explain the benefit of this new layer of certification over and above the certification an operator must sign in submitting reports to EPA.

Noble respectfully submits that the costs and delay inherent in new layers of review such as this far outweigh any environmental benefit they may yield. Instead, Noble urges the agency to focus on measures that will cost-effectively reduce emissions, rather than added paperwork and reporting burdens, as explained in detail above.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Lindel Fowler, Acting Executive Director
Commenter Affiliation: Railroad Commission of Texas
Document Control Number: EPA-HQ-OAR-2010-0505-6917
Comment Excerpt Number: 4

Comment: The Commission opposes any mandatory requirement to use third parties to verify completion of tasks, evaluate performance or implement a review and certification program because it would increase the regulatory and economic burden on oil and gas operators, particularly the smaller operators who make up an overwhelming majority of the industry in Texas. Similarly, the Commission does not support an additional, mandatory regulatory layer of third parties to support compliance reporting; the Commission agrees with TCEQ that the use of third party reporting should be a decision of the regulated entities.

The Commission is concerned that EPA did not sufficiently consider availability of control equipment and the significant drop on oil and gas prices when establishing time lines and compliance dates, and urges EPA to incorporate more flexibility and make sure it prioritizes based on size of emission source.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Alvyn A. Schopp, Chief Administration Officer and Regional Vice President and Treasurer
Commenter Affiliation: Antero Resources Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6935
Comment Excerpt Number: 12

Comment: Antero does not support establishing a third-party verification program.

USEPA is taking comment on establishing a third-party verification program, which is defined as "when an independent third-party verifies to a regulator that a regulated entity is meeting one or more of its compliance obligations." The regulator retains the ultimate responsibility to monitor and enforce compliance but, as a practical matter, gives significant weight to the third-party verification provided in the context of a regulatory program with effective standards, procedures, transparency and oversight.

Antero sees no benefit to third-party verification of the engineering design of these systems. Moreover, Antero submits that the additional time required, cost of the program, and scarcity of appropriately qualified personnel render this proposal ill-advised, unmanageable, and unduly burdensome.

Post-installation certification that systems have been designed and installed in accordance with NSPS requirements and applicable state regulatory requirements should be sufficient. State enforcement authorities will be more than able to verify that systems are installed and operated accordingly. Antero objects to the establishment of a third-party verification program.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Jill Linn, Environmental Manager
Commenter Affiliation: WBI Energy Transmission, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6939
Comment Excerpt Number: 15

Comment: WBI Energy strongly recommends not requiring an audit program of the collection of fugitive emissions components at compressor stations. It is in the regulated company's best interest to have a robust, well executed leak detection plan not only for reduction of methane and VOC emissions but also to ensure compliance with methane and VOC reduction regulations and for ongoing maintenance of facilities.

Companies such as WBI Energy have been able to successfully establish programs to perform compliance monitoring for criteria pollutants at compressor stations such as testing for nitrogen oxides (NOx) and carbon monoxide (CO) from compressor engines. The compliance monitoring functions are performed in a professional and cost effective manner by trained company personnel who are very familiar with not only the monitoring equipment but the equipment being tested as well.

The audit program as described in the proposed rule seems unnecessary and overly burdensome on companies complying with the rule. Companies have operators with valuable in-house experience and hire reliable contractors that are knowledgeable of the facilities to assist with this type of monitoring. The level of demonstration proposed to show the independence of the auditor is restrictive and excessive. It would force companies to hire contractors they have no experience with and who may or may not have knowledge of the facilities being monitored. The regulated entity would then have to make changes to the programs and/or facilities based on the opinion of the auditor who may not have the in depth knowledge of the facility that the operator or company contractor does. For these reasons, EPA should not require a third party audit of the fugitive emissions monitoring program.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Kevin J. Moody, General Counsel
Commenter Affiliation: Pennsylvania Independent Oil & Gas Association (PIOGA)
Document Control Number: EPA-HQ-OAR-2010-0505-6943
Comment Excerpt Number: 14

Comment: To PIOGA's disappointment, EPA has apparently determined that requiring affected facilities to demonstrate compliance through testing, monitoring, recordkeeping, and reporting (including certification of compliance) is not sufficient. The specific example provided by EPA in the Preamble regarding third-party verification is not helpful. Alternatively, the proposed rule should specify that the design of affected closed vent and control system should include a professional engineer's seal and a copy of the seal should be retained as a record. Adding a new third-party verification program layer will create administrative hardships and result in duplicative engineering effort, project delays, and increased costs for affected facilities.

The EPA requests comment on a third-party information reporting program where a third-party reports information concerning a regulated source's performance, directly to the regulator. EPA uses, as an example, federal income tax law where certain income must be independently reported to the Internal Revenue Service (IRS) by payers of the income rather than environmental protection laws. PIOGA objects to the third party reporting. Such an additional program layer will add significant administrative burdens and complexity to an already complex and demanding regulation.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: J. Roger Kelley, Director, Regulatory Affairs
Commenter Affiliation: Continental Resources, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6963
Comment Excerpt Number: 16

Comment: Do Not Propose a Third Party Certification Requirement for LDAR and Storage Vessel Closed Vent System Design

In Section X (Next Generation Compliance and Rule Effectiveness) of the preamble, EPA solicits comments on the agency's consideration of third-party verification of LDAR program compliance and closed vent system design. Continental believes it is unnecessary for EPA to add a third party certification requirement to OOOOa either in the case of LDAR program compliance or closed vent system design. First, oil and gas producers are routinely required to self-certify compliance with the Clean Air Act and other regulatory requirements, and they have managed this obligation without the need for or additional burden of third party verification. Self-certification of OOOOa compliance will be required through state/federal Clean Air Act operating permit requirements. Furthermore, imposing a third party verification requirement cannot be justified based on a legitimate cost-benefit analysis. Any marginal, incremental benefit (in the form of additional reductions of emissions) between third party verification and self-certification will be far outweighed by the per-ton cost of third party verification. Establishing self-certification requirements based on operating parameters and design specifications would be more appropriate.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 24

Comment: Miscellaneous Requests for Input

- IPAA/AXPC does not support EPA's concepts of independent third-party verification, fugitive emissions verification, and "electronic reporting and transparency" as described as part of EPA's Next Generation Compliance and Rule Effectiveness. As an initial matter, companies should be allowed to verify issues internally. EPA's concept of utilizing certified reviewers would pose a significant problem for the industry in terms of not having enough qualified individuals to conduct the review. Eventually the market would adjust, but in the short term there would be a shortage. EPA's concept would create a problem in an attempt to solve an "issue" that currently does not exist. Finally, industry does not support a continuous parametric monitoring system since this would result in significant costs to companies that do not have supervisory control and data acquisition (SCADA) capabilities and would another add link in the system that could fail. A simpler and better solution would be to require all thief hatch vents to be set at a pressure above that of the main ventline.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Richard S. Anderson, Director of Air Quality Compliance
Commenter Affiliation: Plains All American Pipeline, LP
Document Control Number: EPA-HQ-OAR-2010-0505-6996
Comment Excerpt Number: 5

Comment: Third Party Auditing and Verification of Fugitive Monitoring Programs

EPA has requested comments on the concept of third-party verification of fugitive monitoring under Subpart OOOOa. Plains is opposed to such a requirement for the reasons stated below.

Third-party audits are expensive and will impose significant burden on industry for minimal benefit. No cost analysis in support of a third-party verification requirement was presented in the Federal Register notice. Such a cost analysis should be performed before formally proposing any such requirement.

While EPA mentions that such third-party verification is sometimes included in consent decrees, Plains is aware of no fugitive monitoring program imposed by regulation that includes a third-party verification requirement. Third-party verification is costly and burdensome, and aside from EPA's vague and speculative comment that "routine monitoring for fugitives may not be as effective in practice as in design," Plains is not aware that fugitive monitoring data has historically been considered by the agency to be of such poor quality that third-party verification would be merited on a regular basis.

Oversight of fugitive monitoring programs, including documentation of compliance with the published method for OGI, should remain the responsibility of agency inspectors (EPA or state).

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 23

Comment: One certainty emerges from the Agency's discussion of next-gen options: The implementation of next generation approaches the Agency outlines in the proposal preamble would be extremely expensive, and mandatory nationwide requirements would cause an operational and economic disadvantage for operators and impairment to economic development. Nonetheless, EPA has failed to include these costs in its cost-benefit analysis for the rulemaking. Furthermore, EPA presumes, without support, that third-party audits will improve compliance. EPA cannot drop these costly and onerous requirements into the rule without additional opportunity for notice and comment regarding the associated costs and impacts.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 66

Comment: EPA solicits comments on an audit program for the collection of fugitive emissions for components at well sites and compressor stations. Specifically, EPA states that it anticipates "a structure in which the facilities themselves are responsible for determining and documenting that their auditors are competent and independent pursuant to specified criteria." EPA also solicits comments, as an alternative to the "self-certified" audit program, whether the better and more appropriate approach would be for EPA to require auditors "to have accreditation from a recognized auditing body or EPA, or other potentially relevant and applicable consensus standards and protocols (e.g., American National Standards Institute (ANSI), ASTM International (ASTM), European Committee for Standardization (CEM), International Organization for Standardization (ISO), and National Institute of Standards and Technology (NIST) standards), would be preferable." See id. Kinder Morgan submits that any requirement for a mandatory audit program related to fugitive emissions verifications is unreasonable and unnecessary. Additionally, for the reasons discussed in Section V(G)(6)(c), above, Kinder Morgan further submits that in particular, a mandatory audit program required to be conducted by an accredited auditor (accredited by an EPA-recognized auditing body) is absolutely unnecessary and overly burdensome. See Section V(G)(6)(c), above.

As a threshold matter, EPA and most states offer voluntary environmental self-evaluation policies intended to incentivize self-disclosure of potential compliance concerns. Under these programs, EPA and states offer penalty mitigation and other incentives for companies that discover, promptly disclose, and expeditiously correct environmental violations, and take steps to prevent future violations. By mandating an audit program under the Proposed NSPS OOOOa Rule, and particularly to require a third-party audit, would decrease operators' incentives to conduct a broader evaluation of its facilities, permitting, processes, and reporting due to cost, time, and consistency concerns. EPA's Proposed NSPS OOOOa Rule would unravel the entire self-audit policy, and may in fact have the unintended consequence of dis-incentivizing entities to be good stewards by voluntarily self-disclosing and correcting compliance concerns.

Additionally, if EPA requires a "self-audit" program, that audit should in fact be a "self" audit and not required to be conducted by a third-party. For the reasons discussed in V(F)(3), above, EPA provides no clear and substantiated justification for a third-party to conduct a self-audit on behalf of an operator. Operators, including Kinder Morgan, who have been subject to fugitive emissions monitoring and reporting requirements for some time now have allocated substantial resources to hire and train internal personnel as experts, qualified to certify that submissions to agency are correct and true to their knowledge—after critical review and analysis of the same. EPA's proposals here evidences that EPA assumes an alarming amount of bias from a self-auditing team without any supporting facts. In short, EPA has required operators under various

programs (not just NSPS, or even the Clean Air Act) to conduct monitoring and submit reports to the agency for decades in order to ensure compliance with the various applicable regulations. In the Proposed NSPS OOOOa Rule, EPA offers no information or rationale to indicate that current reporting programs have failed (and specifically with respect to fugitive emissions monitoring), thus failing to substantiate a self-audit program to "verify" fugitive emissions monitoring and reporting. Specifically, Kinder Morgan participates in programs that require self-certification, such as NSPS Subparts KKK and LLL, and has effectively and efficiently verified the reports submitted with no overarching compliance concerns.

EPA and other agencies have adopted mandatory audit programs in extremely limited contexts and typically those contexts involve regulations related to health, safety, or prevention of accidents—none of which are implicated by these regulations. Importantly, unlike the program proposed by EPA here, those other limited contexts typically: (1) do not require yearly auditing; (2) do not require the auditing to be completed by a third-party; (3) do not typically require reporting (only maintaining of the information). EPA's program, however, would be far more onerous, and costly. And in fact, EPA's RIA failed to account for any of the costs associated with either third-party verification (as discussed above) or the mandatory self-audit requirement for fugitives' verification. Based on audits it has conducted in the recent past, Kinder Morgan estimates that the weekly cost of a third-party auditor for their time (per person) ranges from $5,000 to $10,000, depending on the firm. Additionally, travel costs generally range from $1,000 to $1,500 per person, plus additional material and other costs. EPA's audit program would not be cost-effective and is therefore unreasonable.

A self-audit requirement would create an unnecessary burden that would render limited, if any, benefits. The following is a summary of some, but not all of the most significant concerns associated with the type of audit program proposed by EPA:

- Requiring auditors to have accreditation from a recognized auditing body or EPA is unreasonable.
- EPA should not develop an audit grading system and post public audit grades or scores in light of cost concerns, confidential business concerns, and the disincentives that such programs engender.
- EPA's definition of conflict of interest would make it impossible for an operator to identify and engage a qualified auditor to review facilities and data necessary for submission to EPA.
- There are simply not enough qualified consultants to conduct the required analyses, especially if EPA were to require a different third party verifier every year on a three-year rolling basis.
- EPA's requirement that the owner or operator demonstrate initial compliance by providing proof of purchase of the applicable control device would be difficult if not impossible in some situations, particularly when the operator has rented the device.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Theresa Pugh
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6872
Comment Excerpt Number: 21

Comment: EPA Fails to Justify Third-Party Verification Requirements for the T&S Sector, When EPA Does Not Require Such Verification for Other Sectors

INGAA does not believe that EPA has provided any justification for mandating third-party verification for the T&S sector. Third-party verification is not a conventional part of the NSPS program where a third party must be hired to verify that the company met its regulatory obligations. INGAA points out that EPA has an ongoing enforcement and inspection program (in addition to the annual reporting under Subpart W) where any failure to have completed all requirements will be identified by EPA.

INGAA does not support third-party audit and verification programs. EPA, in the Proposed Rule, would require third-party audits for leak surveys and repairs (e.g., audit of OGI program), and third-party professional engineer verification of gas capture, closed vent and combustion device designs. The operator is responsible for compliance and third parties do not facilitate that process nor relieve the operator's obligations. In addition, it is unlikely that independent third parties are available that can adequately meet EPA's conflict of interest requirements and fulfill the roles desired by EPA, thus adding unnecessary burden for ineffective requirements.

Sector-specific training and experience would be lacking for "qualified professionals." For example, OGI is a relatively new technology for leak detection. Other than instrument vendors, operating company personnel and their hired third-party contractors (e.g., for Subpart W surveys) have the most experience with OGI technology for detecting leaks in natural gas operations. Since T&S facilities are the majority of facilities that require methane leak surveys under Subpart W, this expertise is unique. Third parties will not likely have the experience to conduct a meaningful audit. Third-party auditors are unlikely to have experience with gas transmission operations and are unlikely to have as much experience with OGI surveys as the operator's team. Thus, third parties cannot be expected to provide beneficial, insightful audit services or reasonable recommendations for an OGI program.

Similarly, transmission companies have in-house expertise and an established relationship with additional resources that address systems design. Third-party verification would likely be conducted by parties with far less experience regarding design considerations for natural gas operations.

In addition, the implications for third-party audits and verification are not clear. It is unclear if the operator would be obligated to implement "recommendations" from the audit that the operator did not support. Recommendations from auditors lacking gas transmission and OGI experience could present significant issues for operators and possible conflicts with other operational, safety or regulatory requirements.

It is unclear where the audit resources would come from, because OGI certification is primarily conducted by instrument vendors. These companies should not perform an independent audit service due to an obvious conflict of interest. Given the lack of trained auditors with appropriate sector-specific and technology experience, and lack of clarity regarding the breadth of audits and the requirements for implementing audit recommendations, it is difficult to assess potential costs at this time.

Lastly, EPA did not even attempt to quantify the cost of third-party audits. However, there is a strong chance that costs would be high, benefit would not be realized, and the early stages of an audit program would more likely consist of operators educating and training the third-party auditors on T&S operations and OGI performance. For these reasons, third-party programs should not be required in Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Pamela Lacey, Chief Regulatory Counsel
Commenter Affiliation: American Gas Association (AGA)
Document Control Number: EPA-HQ-OAR-2010-0505-6936
Comment Excerpt Number: 15

Comment: The Rule Should Not Require Third Party Audits Or Third Party Professional Engineering Design Verification.

Throughout EPA's proposed rule, the Agency has proposed third party participation, including third party audits for leak surveys and repairs (e.g., audit of OGI program) and third party professional engineer verification of gas capture, closed vent, and combustion device designs. AGA is concerned that third parties are not available to adequately fulfill the roles proposed by EPA and recommends that EPA exclude third party audit and verification programs from the proposed rule.

It is likely that "qualified professionals" would lack sector-specific training and experience. For example, OGI is a relatively new technology for leak detection. Since T&S facilities are the majority of facilities that require methane leak surveys under Subpart W, other than instrument vendors, operating company personnel and their hired third party test contractors (e.g., for Subpart W surveys) are the most experienced professionals using OGI technology for detecting leaks in natural gas operations. As a result, this experience is unique to these company personnel and test contractors.

The third party auditors that would be required under the proposal are unlikely to have experience with gas transmission operations and are unlikely to have as much experience with OGI surveys as the operator. As a result, third parties are unlikely to provide beneficial services or reasonable recommendations for an OGI program.

Similarly, operators have in-house expertise and established relationships with outside resources that address systems design. Third party verification of control systems would likely be conducted by parties with far less experience regarding design considerations for natural gas operations.

In addition, the relationship between the third party auditor and the operator is not clear in the proposal. For example, EPA should clarify whether the operator would be obligated to implement "recommendations" from the auditor that the operator did not support. Recommendations from auditors lacking gas transmission (and OGI) experience could present significant issues for operators and possible conflicts with other operational, safety, or regulatory requirements. For these reasons, AGA suggests that third party programs should not be required in Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Kelly Guertin, Senior Environmental Engineer, Environmental Management and Resources
Commenter Affiliation: DTE Energy (DTE Gas Company)
Document Control Number: EPA-HQ-OAR-2010-0505-7052
Comment Excerpt Number: 11

Comment: DTE Energy supports INGAA that EPA has failed to justify third party verification requirements for the T&S Sector, when EPA does not require such verification for other sectors.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 31

Comment: EPA Should not Require a Third-party Verification System in the Proposed NSPS

EPA is soliciting comment on a possible third-party verification program, in which an independent third party would verify to EPA that companies are complying with applicable regulations in the proposed NSPS. Specific to closed vent system design, EPA is concerned that flash emissions can occasionally dwarf normal working and breathing losses of a storage tank, causing pressure relief devices and thief hatches to pop and not reseat, resulting in continuing excess emissions. EPA suggests three possible solutions: (1) require an independent third party to review the design and verify that it is designed to accommodate all emissions scenarios, including flash emissions episodes; (2) require an independent engineer to verify that the control

system is installed correctly; or (3) require a continuous pressure monitoring device or system, located on the thief hatches, pressure relief devices and other bypasses from the closed vent system, to be installed.

Enterprise opposes these "solutions," which are unnecessary for operations in the gathering and boosting segment, and processing and transportation and storage segment, which are downstream of the well tie. Most of the equipment that EPA is concerned about is located upstream of the well tie, where most of the compressor stations in the natural gas production segment that utilize equipment to stabilize the condensate sent to the storage vessels are located. There is no need to specifically address these issues through third-party audits, because the operating permits for these sites already prohibit them from receiving "flash" emissions unless controlled within permitted limits. In contrast to operations where flash emissions are more prevalent, operations at compressor stations in the natural gas transmission and storage segment are distinct and different, and do not pose the same concerns. By requiring midstream operators to obtain these verifications, EPA would be asking companies to incur costs for issues that are unrelated to their actual operations.

In addition, we are opposed to a rule requiring the installation of a continuous pressure monitoring device or system on storage tanks. Such systems do not identify where leakage or compromise is occurring. As a result, companies would be required to incur costs to install devices that do not serve EPA's intended purpose of limiting methane emissions. Moreover, the detection of leaks is better addressed through existing company monitoring plans, or through the use of OGI during fugitive monitoring, to determine if and where a storage vessel has excess emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 35

Comment: Third Party Verification is Unnecessary

In the proposed rule, EPA requests comment on the inclusion of an independent third-party verification program for Subpart OOOOa. 80 Fed. Reg. at 56,648-53. As EPA explains, "[t]hird party verification is when an independent third party verifies to a regulator that a regulated entity is meeting one or more of its compliance obligations." Id. at 56,648. GPA recognizes the importance of verification in the NSPS program and its members are committed to documenting their work to establish compliance with fugitive emissions survey requirements. However, a third-party verification program is completely unnecessary under Subpart OOOOa. As discussed above, EPA already requires extensive and complex recordkeeping and reporting requirements under the proposed rule. These requirements include, among other things, photographs to demonstrate completion of monitoring surveys and repairs of leaking fugitive emissions

components. These proposed recordkeeping requirements will provide EPA with more than enough information to verify that owners or operators are complying with their regulatory obligations. Further, any small incremental benefits that may come from adding third-party verification to the proposed recordkeeping requirements would be dwarfed by the cost of such a program. Well sites and compressor station sites are often located in remote areas without easy access. It makes little sense to require third-party verification for such locations when it is not required of larger and more accessible facilities regulated under other NSPS subsections. In addition, requiring an independent third party to accompany a monitoring team to such locations to verify monitoring and repairs will add significant costs to the program. Without some evidence that these surveys cannot be conducted properly by regulated entities, EPA's proposal for third-party verification is simply a solution in search of a problem. Therefore, GPA urges EPA to refrain from imposing such unnecessary obligations on the oil and natural gas sector under Subpart OOOOa.

In addition, even without a third-party verification program, EPA and state agencies with delegated authority under the NSPS program would have the opportunity to conduct their own OGI surveys at any time to verify the data reported by operators. Such oversight is a central part of EPA's enforcement authority. It is inconsistent with EPA's role as the primary CAA enforcer to delegate both the authority and cost of compliance monitoring to the regulated entities themselves. In essence, EPA is imposing an unfunded enforcement mandate on the very entities it is supposed to be regulating that would require them to conduct EPA's oversight requirements for the agency. This also raises concerns under the Antideficiency Act's prohibition on accepting voluntary services. 31 U.S.C. § 1342 ("An officer or employee of the United States Government … may not accept voluntary services for either government or employ personal services exceeding that authorized by law except for emergencies involving the safety of human life or the protection of property.").

Finally, EPA cannot justify increased monitoring, recordkeeping, and reporting obligations by referencing consent decrees in enforcement actions such as those in the U.S. and CARB v. Hyundai Moto Company, et al. Consent Decree. See 80 Fed. Reg. at 56,650. Regardless of whether EPA is considering third-party verification or enhanced self-auditing requirements, it is inappropriate for EPA to base generally applicable regulations on consent decrees that impose more stringent requirements on facilities that have violated the CAA and/or EPA's regulations. While additional verification and auditing requirements may be an appropriate safeguard at facilities with a history of non-compliance, EPA has offered no basis for imposing such restrictions on all affected facilities, regardless of their compliance history. Thus, EPA should not rely on enforcement-related requirements when designing generally applicable NSPS standards.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance

Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 58

Comment: The proposed rule solicits comment on requiring professional engineer (PE) certification of storage tank vapor control systems. The Alliance strongly opposes this requirement. If promulgated, this portion of the rule could force a design analysis, requiring facility redesign at thousands of facilities across the country. The proposed rule does not contemplate the costs associated with the impacts of this requirement. This potential requirement is infeasible for several reasons:

- System design is typically conducted in-house prior to production. At that point, the production volumes, composition, and many other factors are unknown. As a result, it would be impossible to certify the effectiveness of a design prior to construction.
- Atmospheric storage vessels are designed to have some loss of emissions through normal operating design (see comment above regarding impracticability of closed vent systems). Given this, it would be unreasonable to expect a PE to certify that all emissions are being routed to a control device.
- Operators do not typically use third-party contractors to design their facilities. Retaining a third-party simply for certification is impractical for the reasons stated above, and would add significant cost and delay to facility design.

While some Alliance members may support some elements of EPA's next generation compliance program, that program does not grant EPA unfettered authority to promulgate regulations that could force the entire industry to change the way in which it designs and operates its facilities or reports information—particularly where the rule has neither demonstrated the need to do so, nor discussed the environmental benefits to be obtained or the costs to be incurred. The next generation program must be reasonable with respect to its requirements and its consequences. On balance, we do not believe requiring third party certification of design is reasonable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 40

Comment: The proposed rule solicits comment on requiring professional engineer ("PE") certification of storage tank vapor control systems. MarkWest strongly opposes this requirement. If promulgated, this portion of the rule could force a design analysis, requiring facility re-design, at thousands of facilities across the country. The proposed rule does not contemplate the costs associated with the impacts of this requirement.

This potential requirement is infeasible for several reasons:

- System design is typically conducted in-house prior to production. At that point, the production volumes, composition, and many other factors are unknown. As a result, it would be impossible to certify the effectiveness of a design prior to construction.
- Atmospheric storage vessels are designed to have some loss of emissions through normal operating design *(see* comment above regarding impracticability of closed vent systems). Given this, it would be unreasonable to expect a PE to certify that all emissions are being routed to a control device.
- Operators do not typically use third-party contractors to design their facilities. Retaining a third party simply for certification is impractical for the reasons stated above, and would add significant cost and delay to facility design.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 49

Comment: Independent Third-Party Verification

In the preamble, EPA asserts that third-party verification "may" improve compliance; however, EPA provides no information regarding how third-party verification would actually improve compliance. EPA does not explain why self-certification programs (like those under existing NSPS programs) would not work or why third party verification would improve compliance.

The following comments provide some additional comments discussing why API believes the options discussed in the preamble are neither legal nor necessary.

EPA Lacks Authority To Require Third-Party Verification

As was noted in API's November 30, 2011 comments on the original Subpart OOOO proposal and EPA's request at that time for comment on innovative compliance options, EPA has again, in this rulemaking, not explained where it finds legal authority to impose a third-party verification requirement.

While EPA has authority to require such monitoring, recordkeeping, notification, and reporting requirements as are reasonably needed to assure compliance with Part 60 emissions standards. There is nothing on the face of the statute (and the statute cannot reasonably be construed as) authorizing EPA to require affected facilities to hire contractors to do EPA's work. EPA freely admitted in the 2011 Subpart OOOO proposal that assuring compliance with the well completion requirements would be "very difficult and burdensome for state, local and tribal agencies and EPA permitting staff, inspectors and compliance officers." As was the case in the original rulemaking, it again appears the purpose of the third-party verification requirement would be for the third-party verifiers to relieve burden on EPA. Simply put, EPA does not have authority

under the CAA to require affected facilities to hire contractors to do work on behalf of the Agency.

Moreover, such a requirement would run afoul of the Antideficiency Act. A third party verification requirement clearly would circumvent the limited Congressional budget appropriation for EPA enforcement activity. Such circumvention violates the prohibition against authorizing expenditures "exceeding an amount available in an appropriation or fund for the expenditure." 31 U.S.C. §1341(a)(1)(A).

For these reasons, even with a re-proposal, EPA is without authority to impose a third party verification requirement.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 48

Comment: Any EPA Actions Related To "Next Generation Compliance" Must Be Based Upon Proposed Rule Language

No proposed rule text is provided that incorporates the issues on which EPA is soliciting comment in Section X of the preamble to the Subpart OOOO and Subpart OOOOa proposals. As a result, commenters do not have adequate clarity or notice of how the third party verification system would work and cannot ascertain whether the regulatory text would faithfully implement the concept. To resolve these problems, EPA would need to formally propose any third-party verification or third-party reporting requirements before finalizing any of them.

EPA has previously dealt with a similar situation and the corresponding need to provide comment on proposed requirements during the development of NSPS Subpart VVa and CISWI rules. *See* 73 Fed. Reg. 31,372, 31,373 (June 2, 2008) EPA determined that "[s]ection 60.482-11a is stayed from August 1, 2008 until further notice" because "these were first introduced in the final rule (indeed, with respect to connector monitoring, we explicitly stated in the proposal that we did not intend to address them in this rulemaking. Accordingly, certain facilities may be out of compliance with requirements for which they had no notice or time to come into compliance.") (emphasis added); *see also Portland Cement Ass'n v. E.P.A.*, 665 F.3d 177, 186 (2011) ("While we certainly require some degree of foresight on the part of commenters, we do not require telepathy. We should be especially reluctant to require advocates for affected industries and groups to anticipate every contingency. To hold otherwise would encourage strategic vagueness on the part of agencies and overly defensive, excessive commentary on the part of interested parties seeking to preserve all possible options for appeal. Neither response well serves the administrative process. Whatever warning EPA offered regarding CISWI was too vague and noncommittal to trigger a response from PCA. Indeed, as far as EPA did hint at its

next steps, it suggested it would reevaluate the NESHAP standards after the CISWI definition was promulgated.").

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 26

Comment: EPA Should Issue a Supplemental Proposal in Order to Fulfill the Agency's Statutory Obligation to Provide an Adequate Opportunity for Notice and Comment

In the Next Generation Compliance section of the preamble to the Proposed Rule EPA proposes or solicits comment on "establishing a third-party verification program," which would involve regulated entities hiring auditors and certifiers with particular qualifications in order to proceed with construction or otherwise satisfy requirements of this rule. Indeed, EPA acknowledges the Agency "is considering a broad range of possible design features for such a program" under two general scenarios: third-party verification of closed vent system design and third-party verification of the IR camera fugitives monitoring program. However, the proposed rule does not contain any substantive provisions that would reflect this programmatic approach to verifying compliance. While there are some situations in which new regulatory language is appropriately introduced in a final rule, in this instance, EPA proposes to add an entirely new third-party compliance *program* in the final rule without taking comment on the regulatory provisions. While it is always appropriate to solicit comment on the concepts of a planned regulatory program, doing so does not substitute for soliciting comment on the regulatory provisions that would implement those concepts. As a result, members of the public would be deprived of a meaningful opportunity to comment on any third-party program should EPA decide to issue such requirements in final form.

With respect to the concept of third party verification in the context of the proposed NSPS, TXOGA has several overarching concerns related to this concept that are not raised in the proposal: First, the proposal is silent as to what substantive criteria the industry must satisfy to comply with the regulation. Second, the proposal does not specify the verification procedures for compliance, if any. Third, the substantive criteria needs to be geared to what is truly necessary to demonstrate compliance to achieve the BSER as codified. The proposal does not outline the criteria to establish that a regulated entity has implemented BSER. These criteria will necessarily be geared toward that particular technology or limitation. In many instances in the proposal, there is no necessary follow up verification except for the standard initial verifications in quarterly or semi-annual reports in typical NSPS.

Moreover, to go beyond the requirements EPA has proposed and fully analyzed in the proposal, EPA must justify why additional procedures are necessary for compliance verification, *i.e.*, why the current certification requirements are insufficient, particularly given the increased costs of

compliance with any new verification provisions. These costs must be taken into account in the establishment of the BSER standard in the first place. These additional costs should be taken into account when determining if the cost of the standard is reasonable.

The CAA incorporates the Administrative Procedure Act notice requirements by reference and expressly requires EPA to provide notice of its proposed rule through a statement of its basis and purpose, including (a) the factual data on which the proposal is based, (b) the methodology used in obtaining and analyzing data, and (c) the major legal interpretations and policy considerations underlying the proposed rule. Such notice is required in order to give the public a meaningful opportunity to comment. "The significance of rulemaking cannot be underemphasized. It gives parties affected by a decision an opportunity to participate in the decision-making process and forces EPA to articulate the bases for its decisions." EPA should provide adequate notice and opportunity for comment on the details of any provisions that involve regulated entities hiring third parties, particularly given that the details of the regulatory provisions will have a significant impact on the costs of such a program.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 52

Comment: EPA Should Not Presume Industry Will Fail to Properly Implement the Proposed Leak Detection and Repair Requirements

In Section X of the NSPS preamble, EPA solicits comments on an audit program of the collection of fugitive emissions components at well sites and compressor stations (FR 56649).

EPA explained the request for input on this matter based on the comment that they "have ample experience from our enhanced LDAR efforts under our Air Toxics Enforcement Initiative, that even when methods are in place, routine monitoring for fugitives may not be as effective in practice as in design." This analogy is flawed for numerous reasons, not the least of which is that most issues identified by the Air Toxics Enforcement Initiative relate to alleged failures related to the implementation of M21-based LDAR programs at facilities with thousands, and in some cases, up to hundreds of thousands of individual components subject to monitoring. It is noted that the scope of the oil and natural gas site operations are significantly different than any situations addressed in the enforcement initiative cited.

In the preamble (FR 56649-56650), EPA is quite detailed in describing the potential structure of an audit program for LDAR compliance as well as alternative auditor/auditing approaches with "less rigorous" independence criteria. Meanwhile, within the proposed Subpart OOOOa provisions, EPA has provided specific requirements related to the recordkeeping and work

practices that must be followed as part of the leak detection requirements (see Section 27.0 of these comments for proposed provisions).

EPA is right that there will be challenges with the implementation of the LDAR requirements as proposed. See Section 27.0 of these comments for additional discussion of API's recommendations related to suggested improvements to the proposal rule to help address these challenges.

However, API believes it is unwarranted for EPA to assume or anticipate that industry will not comply with the regulatory requirements. As a result, it is inappropriate for EPA to preemptively require additional compliance measures that have been historically used as part of consent orders resulting from enforcement actions.

Even if EPA has statutory authority to require third party verifications, the same factors that make compliance assurance difficult and burdensome for State and EPA staff (such as geographically dispersed and remote locations) would make any use of third party verification costly to the regulated industry. In the proposed rulemaking and supporting documentation, EPA does not quantify or evaluate in the Regulatory Impact Analysis or proposed rule the costs associated with third party verification. In the GHG reporting program, EPA similarly proposed a third-party verification of the GHG report and declined to include in its final rule. See 74 Fed. Reg. 56,520, 56,5282-84 (October 30, 2009) (for a national program involving significant reporting such as the GHG reporting program, third-party verification was not the preferred approach). Specifically, EPA expressed concerns that a third party verification program: (1) would require EPA to establish third-party verification protocols; (2) would require EPA to develop a system to qualify and accredit third party verifiers; and (3) would require EPA to develop and administer a process to ensure verifiers do not have conflicts of interest. EPA thought that setting up a third-party program would slow down implementation of the rule. EPA also estimated that the first year of the program (with a third-party verification requirement) would cost $42 million. GHG reporting rule and Subpart OOOOa would cover a similar scope and thus raise similar concerns as were raised in the GHG reporting rule. Accordingly, any action by EPA to incorporate verification into Subpart OOOOa must progress through a formal rulemaking process with proper assessment of cost-benefit of the additional requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 38

Comment: Finally, we are troubled by the air of mistrust that EPA's Next Generation initiatives seem to express toward regulated entities. For example, EPA states that one of its primary concerns is that "an owner or operator would install a control device, and not conduct a performance test, claiming that they installed a device listed on the Oil and Gas page." The

overall tenor of EPA's proffered Next Generation approach is that regulated entitles might engage in deceit, such that mechanisms should be put in place to independently verify information that they provide to EPA. Many EPA programs have traditionally been based on the premise that companies will honestly report information to regulators, and that sworn certifications and certified reports by responsible officials will be accurate. We are not aware of any indication that this approach has failed or has tended to result in the provision of unreliable information to EPA, and we do not believe that there is any need for a new program of third party verification and similar measures that are based on the assumption that EPA is not receiving accurate information from regulated companies.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 33

Comment: EPA is taking comment on so-called "Next Generation" compliance measures, including independent third-party verification of regulated entities' compliance with regulatory requirements, *e.g.* certification by a third party that a regulated entity's closed vent system is designed to accommodate flash emissions and I or that control systems have been designed and installed correctly; an audit program related to monitoring of fugitive emissions at well sites and compressor stations; reporting by third-parties to EPA regarding whether regulated entities are complying with regulatory requirements; and measures aimed at increasing the use of electronic reporting and increasing the transparency of information related to regulated entities' operations.

TPA sees no need for rules that would make the "Next Generation" concepts generally applicable to all regulated sources in the oil and gas source category. It is notable that EPA acknowledges that some of the concepts being considered have been incorporated in two prior EPA consent decrees, involving BP Products and Hyundai Motor Company, and in fact we note that "Next Generation" concepts are found in a number of additional prior EPA consent decrees as well. For example, the consent decrees entered in the Tonawanda Coke and Noble Energy settlements included several so-called Next Generation elements: the Noble Energy settlement required the company to install Next Generation pressure monitors with continuous data reporting on tank systems to verify that the tanks are not experiencing increased pressure readings indicative of over-pressurization that could cause VOC emissions, while the Tonawanda Coke settlement included Next Generation tools such as third-party compliance audits and public release of pollution data. Next Generation approaches are contained in several other recent EPA consent decrees, as documented in an EPA-published list of "ten enforcement settlements that address noncompliance by ... leveraging Next Gen tools and approaches." More generally, EPA has indicated that Next Generation tools should be considered in future enforcement cases, and that "case teams are expected to consider these Next Gen compliance tools in all cases other than expedited settlements, and to include them whenever appropriate in civil judicial and administrative settlements."

TPA's basic objection is that measures and remedies contained in consent decrees should not be made more broadly applicable to all regulated entities in the oil and gas source category. Consent decrees and the requirements contained therein are, and should be, reserved for extraordinary situations, where a company was found to have engaged in significant violations of regulatory requirements. In such cases, it may be that unusual and relatively onerous measures are in order. But it does not follow that the same sorts of measures should be imposed upon *all* regulated entities. To do so would be to effectively punish all companies for the misconduct of a few. Most companies make a great effort to comply with regulatory requirements. These companies should not be lumped in with a few outlier situations and made to bear additional burdens that should be reserved for violators and consent decrees that respond to substantial violations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 46

Comment: EPA is considering the option to have an independent Professional Engineer (PE) review the design of systems and verify that it is designed to accommodate all emissions scenarios, including flash emissions episodes (P321). We do not believe that this review should be required for all owner/operator facilities. If EPA believes that Professional Engineers should be involved in the design and implementation process, we suggest that the PE is only involved in reviewing system improvement drawings for locations that repeatedly fail to meet survey and repair requirements. We suggest that a PE review drawings for corrective actions only at facilities where the same components are found to be leaking during three consecutive surveys.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: John W. Mitchell
Commenter Affiliation: Kansas Department of Health and Environment (KDHE)
Document Control Number: EPA-HQ-OAR-2010-0505-6804
Comment Excerpt Number: 5

Comment: *Issue: Third party information reporting and certifications*

While KDHE is supportive of oil and gas companies using independent, third party firms for certification, evaluation and verification; and for fugitive emissions monitoring, KDHE does not support mandating the use of third parties for these tasks. If EPA's goal is to reduce methane and VOC emissions, the focus should be on what can be done to achieve these results without placing undue regulatory burdens on industry. If EPA mandates the use of third parties for these actions, EPA should establish and maintain a register of qualified individuals and companies

available to perform third-party verification for compliance with the fugitive monitoring requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: C. William Giraud
Commenter Affiliation: Concho Resources Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6847
Comment Excerpt Number: 18

Comment: Concho recommends that EPA not require third-party professional engineer certifications of closed vent system designs and sizing. Like many companies, Concho designs such systems using in-house staff. The initial design is prepared prior to production and is based on assumptions about projected volumes and gas composition, among other factors. Because so many variables are unknown at the initial design stage, it is not possible to certify the design's effectiveness prior to construction. In addition, storage vessels are operationally designed to have some loss of emissions; making it unreasonable to expect a professional engineer to certify that *all* emissions are being routed to a control device. Storage vessels are designed this way in order to avoid a pressure build up which could cause an explosion and unsafe working conditions. Being forced to retain a third-party for certification purposes only would be ineffective and costly. Instead, Concho recommends that an in-house engineer verify that the system has been designed to operate at the lowest emissions possible, based upon reasonable engineering judgments at the time of design.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 34

Comment: With regard to the specific Next Generation approaches that EPA is contemplating, EPA begins by suggesting a possible third-party verification program, whereby an independent third party would verify to EPA that a company is complying with applicable regulations related to closed vent system design or infrared camera fugitives monitoring. Regarding vent system design, EPA is concerned that flash emissions can dwarf normal working and breathing losses of a storage vessel, causing pressure relief devices and thief hatches to pop open and not reseat, resulting in continuing excess emissions. EPA suggests various "Next Generation" solutions to this perceived issue, including a requirement that an independent third party must review the design of the vessel to verify that it is designed to accommodate all emissions scenarios and that control systems are designed correctly, as well as a requirement that a continuous pressure monitoring device or system be installed.

We believe that such requirements would be overkill and far out of proportion to the supposed problem being addressed. In our experience it is highly unusual for thief hatches to pop open due to flash emissions and remain open for a substantial amount of time, such that new regulatory approaches would be required. EPA should not mandate "Next Generation" requirements to remedy the open thief hatch issue which rarely occurs and, when it does, results in relatively low and short-lived emission events.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6881, Excerpt 36.

Commenter Name: Alvyn A. Schopp, Chief Administration Officer and Regional Vice President and Treasurer
Commenter Affiliation: Antero Resources Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6935
Comment Excerpt Number: 13

Comment: USEPA is requesting comment as to whether the agency should specify criteria by which an independent third-party Professional Engineer (PE) verifies that the closed vent system at a site is designed to accommodate all streams routed to a facility's control system, or whether USEPA should cite to current engineering codes and process simulation models such as ProMax® that produce the same outcome. Antero suggests that current engineering codes are sufficient to determine that the closed vent system at a site is designed to accommodate all streams routed to a facility's control system.

Response: As discussed in the response to DCN EPA-HQ-OAR-2010-0505-6881, excerpt 36, the EPA is finalizing a requirement for a qualified professional engineer certification in lieu of independent third-party verification for closed vent system design. We are also finalizing a qualified professional engineer certification of the infeasibility of routing a pneumatic pump to an existing control device. In response to comments, we are not specifying the criteria that the professional engineer should use. Instead, the final rule includes minimum design elements that the professional engineer must evaluate. Additionally, the professional engineer must certify that the certification was prepared under their direction or supervision, and that the assessment was conducted and the report was prepared pursuant to the requirements of subpart OOOOa. See section VI.J.4 of the preamble to the final rule for more information regarding this issue.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 65

Comment: Third-Party Engineering Evaluation of Storage Vessel Vapor Collection and Control Systems Should Not Be Required

EPA has viewed emissions from storage vessels observed by OGI during inspections pursuant to its energy extraction enforcement initiative as indications of inadequate design and potential violations of the Act, rather than operation and maintenance issues.

> One potential remedy for the inadequate design and sizing of the closed vent system would be to require an independent third-party (independent of the well site owner/operator and control device manufacturer), such as a professional engineer, to review the design and verify that it is designed to accommodate all emissions scenarios, including flash emissions episodes. Another element of the professional engineer verification could be that the professional engineer verifies that the control system is installed correctly and that the design criteria is properly utilized in the field.

The EPA requests comment on these approaches. Specifically, EPA requests comment as to whether criteria should be specified by which the PE verifies that the closed vent system is designed to accommodate all streams routed to the facility's control system, or whether "we might cite to current engineering codes that produce the same outcome."

The BSER for storage vessel affected facilities has been established, and EPA should not prescribe a particular system that must be used to comply with that standard. As EPA has acknowledged, the Agency "may not prescribe a particular technological system that must be used to comply with a NSPS. Rather, sources remain free to elect whatever combination of measures will achieve equivalent or greater control of emissions." The Agency, cannot, therefore, prescribe specific steps an owner or operator must take to satisfy the standard.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6935, Excerpt 13.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 45

Comment: An option is being considered for owners and operators to be responsible for determining and documenting that the auditors are competent and independent. We believe that this additional requirement further strains regulated companies to perform background checks and continue to ensure that the third-party auditors are competent. If EPA desires to have an independent third-party auditing and verification system established, EPA should develop the criteria and certify the auditor/verification companies. Based on the obligated parties experience with fraudulent RIN purchases discussed above, we believe that EPA should be involved in the certification process of third parties to reduce the risk of all companies participating in compliance activities.

Response: In response to comments, we are not finalizing requirements related to auditors of fugitive monitoring programs. However, as discussed in the response to DCN EPA-HQ-OAR-

2010-0505-6881, Excerpt 36, the EPA is finalizing a requirement for a qualified professional engineer certification in lieu of independent third-party verification for closed vent system design. We are also finalizing a qualified professional engineer certification of the infeasibility of routing a pneumatic pump to an existing control device. We have concluded that professional engineers, whether independent or employees of a facility, being professionals, will uphold the integrity of their profession and only certify documents that meet the prescribed regulatory requirements and that the integrity of both the professional engineer and the professional oversight of boards licensing professional engineers are sufficient to prevent any abuses. Therefore, we are not finalizing requirements for owners or operators to determine competence and independence of auditors. See section VI.J.4 of the preamble to the final rule for more information regarding this issue.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 32

Comment: In addition, EPA should allow operators flexibility in determining the best approach to use in designing their Leak Monitoring Plans. In the preamble to the proposed NSPS, EPA states that it anticipates a structure where facilities themselves are responsible for determining and documenting that the personnel who conduct fugitive emissions audits are competent and independent pursuant to specified criteria. EPA has asked for comment on whether this approach is appropriate, or whether an alternative approach, such as requiring auditors to have accreditation from an auditing body or EPA, or other consensus standards and protocols (such as ANSI, CEM, or ASTM), would be preferable.

Rather than adopting a single strategy that all operators must comply with, Enterprise encourages EPA to adopt a policy that allows companies the flexibility they need to design the most effective program for their operations. We believe that a strong Leak Monitoring Plan can identify the processes that work together to assure the integrity of the program. Such processes may include conducting fugitive emissions audits or other actions that work to confirm the integrity of the program. However, requiring consensus standards and protocols, such as the ASTM, CEM, or ASTM standards, or a "certified" fugitive's audit, will not guarantee that the Leak Monitoring Plan will perform any better.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 53

Comment: The preamble stipulates that to ensure the competence of the auditor, certain criteria should be met, for example:

> Competence of the auditor can include safeguards such as licensing as a Professional Engineer (PE), knowledge with the requirements of rule and the operation of monitoring equipment (e.g., optical gas imaging), experience with the facility type and processes being audited and the applicable recognized and generally accepted good engineering practices, and training or certification in auditing techniques.

With respect to auditor competence, PE licensure does not equate to competence in the upstream oil and gas industry nor in fugitive emissions mitigation and OGI. The most important criteria related to OGI technician competence are training and experience with OGI technologies, in general, and direct hands-on experience in the oil and gas industry, in particular. It should not be necessary that an OGI technician hold a bachelor of science in Engineering and for those engineers who are employed as OGI technicians, it should not be necessary to hold PE licensure. Such a stringent requirement would eliminate nearly all currently practicing and highly competent OGI technicians and would be the equivalent of requiring an ultrasound technician to hold a medical degree. A focused and reasonable training program would be reasonable to assure competency in the proper operation of OGI instrumentation, optimal ambient conditions for OGI surveys, and operation of oil and gas well site and compressor station equipment and operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 66

Comment: Moreover, EPA has not established a correlation between PE licensure and competence in engineering design of air pollution control systems. Requiring professional engineer (PE) licensure for the design of, or verification of "adequate design" of, production tank vapor collection systems by a PE is a matter under the authority of state boards of professional engineers or other state entities and not the federal government.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: C. Wyman
Commenter Affiliation: American Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-6874
Comment Excerpt Number: 18

Comment: The Rule Should Not Require Third Party Audits or Third Party Professional Engineering Design Verification

Throughout EPA's proposed rule, the Agency has proposed third party participation, including third party audits for leak surveys and repairs (e.g., audit of OGI program) and third party professional engineer verification of gas capture, closed vent, and combustion device designs. AGA is concerned that third parties are not available to adequately fulfill the roles proposed by EPA and recommends that EPA exclude third party audit and verification programs from the proposed rule.

It is likely that "qualified professionals" would lack sector-specific training and experience. For example, OGI is a relatively new technology for leak detection. Since T&S facilities are the majority of facilities that require methane leak surveys under Subpart W, other than instrument vendors, operating company personnel and their hired third party test contractors (e.g., for Subpart W surveys) are the most experienced professionals using OGI technology for detecting leaks in natural gas operations. As a result, this experience is unique to these company personnel and test contractors.

The third party auditors that would be required under the proposal are unlikely to have experience with gas transmission operations and are unlikely to have as much experience with OGI surveys as the operator. As a result, third parties are unlikely to provide beneficial services or reasonable recommendations for an OGI program.

Similarly, operators have in-house expertise and established relationships with outside resources that address systems design. Third party verification of control systems would likely be conducted by parties with far less experience regarding design considerations for natural gas operations.

In addition, the relationship between the third party auditor and the operator is not clear in the proposal. For example, EPA should clarify whether the operator would be obligated to implement "recommendations" from the auditor that the operator did not support. Recommendations from auditors lacking gas transmission (and OGI) experience could present significant issues for operators and possible conflicts with other operational, safety, or regulatory requirements. For these reasons, AGA suggests that third party programs should not be required in Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 40

Comment: EPA describes a number of options for ensuring fugitive emission verification. In section IX Implementation Improvements, part (B) Fugitive Emissions Verification, the EPA describes possibly allowing parties responsible for performing leak surveys to have a professional registration such as that provided by ANSI, ASTM, ISO or NIST. The PBPA would request that persons with Professional Geoscientist licensure be recognized, at a minimum, as equal to other professional registrations. Professional Geoscientists provide services in the areas of environmental geology, hydrogeology, engineering geology, and other areas that must be performed competently and ethically to protect the public health, safety, welfare, and protect natural resources. Failure to perform these services competently and ethically can result in disciplinary action by the board up to and including revocation of licensure.

Persons with Professional Geoscientist licensure should be recognized, at a minimum, as equal to other professional registrations offered.

Response: The EPA appreciates the information concerning Professional Geoscientists provided by the commenter. In the preamble to the proposed rule, we requested comment on independent third-party verification of IR camera fugitives monitoring programs. The comments we received raised a number of possible issues with the verification program. At the present time, we are not finalizing a third-party verification program in order to further consider the comments received and also to determine whether such a program is needed to improve compliance with the standards. Therefore, this comment is now moot.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 7

Comment: Third-Party Verification Program

We support the use of third parties verifiers and urge EPA to provide in the final rule the option for state registered professionals to also verify compliance obligations. EPA has proposed allowing sources the option to utilize third-party entities to demonstrate compliance in such activities as fugitive emissions verifications and closed vent system design analyses which provides additional flexibility to affected sources. We further request that EPA establish specific approved criteria for accreditation. Requiring third-party accreditation from a recognized auditing body. Entities accredited by consensus standards and protocols should be considered in establishing specific third-party entity approval criteria (e.g. American National Standards Institute (ANSI), ASTM International, European Committee for Standardization (CEM), International Organization for Standardization (ISO), and National Institute of Standards and Technology (NIST)). Companies should also be allowed to utilize in-house state registered Professional Engineers (PE's) and Professional Geologists (PG's), where demonstrated experts in their field that have been utilized to meet compliance obligations in other air regulatory programs (e.g. review and seal of Title V permit applications).

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 61

Comment: We do not believe that the requirements for the third-party verification companies will be fully defined until the final regulation is posted to the Federal Register. We do not agree with the perspective that a sufficient number of third-party reviewers will be approved as competent, independent, and accredited within 60 days of publication to the Federal Register. The governing body to determine competent, independent, and accredited has not been identified in this proposed regulation.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 47

Comment: EPA would like to have a Professional Engineer be independent of the well site owner/operator and also independent of the control device manufacturer. We submit that any PE performing work, either independent of the owner/operator or control device manufacturer or directly employed by the owner/operator, will perform work to the highest standard and does not need to be independent of either organization. We propose that a Professional Engineer with knowledge of piping and emissions system should be able to review and approve designs and installation, regardless of their employment affiliations.

Many owner/operators and control device manufacturers employee qualified Professional Engineers. Requiring third-party review and approval of system design and installations increases the owner/operator's cost and increases the time to implement projects. If a qualified PE is employed by the owner/operator or equipment manufacturer, they should be permitted to approve designs and installations to better manage costs and scheduled without involving a third party for verification activities.

The proposed regulation also requires third-parties to be completely independent of the company that they are performing survey work. Page 324 states, "Independence of the auditor can be ensured by provisions and safeguards in the contracts and relationships between the owner and operator of the affected facility with auditors. These can include: the auditor and its personnel must not have conducted past research, development, design, construction services, or consulting for the owner or operator within the last 3 years; the auditor and its personnel must not provide

other business or consulting services to the owner or operator, including advice or assistance to implement the findings or recommendations in the Audit report, for a period of at least 3 years following the Auditor's submittal of the final Audit report; and all auditor personnel who conduct or otherwise participate in the audit must sign and date a conflict of interest statement attesting the personnel have met and followed the auditors' policies and procedures for competence, impartiality, judgment, and operational integrity when auditing under this section; and must receive no financial benefit from the outcome of the Audit, apart from payment for auditing services themselves..."

We recognize EPA's intention to have independence between the regulated entities and third party service providers, but these requirements are not practical. If these requirements are included in the final regulation, we will not be able to use local companies to provide third-party services. Our companies have business relationships with almost every supplier in our area. If we are required to use third-party companies that meet these requirements, we will be required to contract with companies from other basins that we have no business relationship. This type of structure further increases our compliance cost because we are required to pay travel cost and per diem (in addition to survey or engineering cost) for third-party companies to send employees to perform services. We are also concerned about the ability to meet EPA's requirements to complete surveys in a timely manner (within 30 days after well completion and within 15 days of identifying and repairing leaking components) if we are required to work with companies that are not local.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 54

Comment: EPA also stipulates that to ensure the independence of the auditor, certain criteria should be met, including "provisions and safeguards in the contracts and relationships between the owner and operator of the affected facility with auditors." Such criteria can include:

> The auditor and its personnel must not have conducted past research, development, design, construction services, or consulting for the owner or operator within the last 3 years; the auditor and its personnel must not provide other business or consulting services to the owner or operator, including advice or assistance to implement the findings or recommendations in the Audit report, for a period of at least 3 years following the Auditor's submittal of the final Audit report; and all auditor personnel who conduct or otherwise participate in the audit must sign and date a conflict of interest statement attesting the personnel have met and followed the auditors' policies and procedures for competence, impartiality, judgment, and operational integrity when auditing under this section; and must

receive no financial benefit from the outcome of the Audit, apart from payment for the auditing services themselves.

EPA postulates that these provisions will "minimize audit bias." EPA also suggests that reports would be submitted to EPA simultaneously with submittal to the owner/operator. EPA fears of auditor bias are grossly overblown, particularly in light of the fact that EPA has not demonstrated that a third party audit, much less one subject to these extreme independence- verification provisions, would actually improve compliance. EPA's suggestion that previous inclusion of such requirements in consent decrees is some indication that they are effective is not only inappropriate, but it also makes no sense. The fact that a company might agree in the context of a consent decree to a particular requirement does not indicate that the requirement is effective, reasonable, cost-effective, or otherwise sufficient to satisfy the elements that EPA must establish to show that it has met the statutory criteria for a standard under Section 111.

It is worth noting that EPA has not demonstrated a rationale justifying an arbitrary exclusion period defining independence. Excluding auditing contracting firms or auditors based on performance of past research, development, design, construction services, or consulting for the owner or operator within the last 3 years is not practical and would unnecessarily narrow the pool of qualifying and competent auditors available to the industry. Independence can be achieved without an arbitrary exclusion period (*i.e.*, 3 years). For example, the Board of Environmental, Health & Safety Auditor Certifications (BEAC) sets guidelines for achieving independence that do not involve exclusion periods.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 34

Comment: If EPA does require third-party auditing, we recommend that EPA not impose any of its suggested conflict of interest standards for audit personnel. As EPA acknowledges in the preamble to the proposed NSPS, there is already a shortage of qualified OGI personnel to conduct fugitive audits. Enterprise shares EPA's concern, particularly for remote regions where many of the facilities operated by Enterprise and other operators are located. This problem would only be exacerbated if EPA placed additional restrictions on who may perform these audits, and could very well leave operators in many regions without sufficient qualified auditors to perform the audits within the time periods that EPA has allowed under the proposed NSPS.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 36

Comment: EPA also seeks comment on the imposition of restrictive revolving door *I* conflict of interest standards for audit personnel. We oppose any such restrictions because, once again, we are aware of no "problems" currently existing in the industry that need to be "remedied" through a new conflict of interest program. We believe that such a program would have a negative impact; particularly because it may be difficult for regulated entities to find an adequate number of trained personnel to perform all of the new OGI surveys and resurveys that would be required by the new Subpart OOOOa fugitive monitoring requirements. That problem would only be exacerbated by rules that could put otherwise-qualified personnel out of play due to revolving door or conflict of interest issues. EPA is obviously aware of this potential problem, as it specifically seeks comments on this issue in the preamble. We agree with EPA's concerns and we oppose any such restrictions as being both unnecessary and potentially counter productive.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 37

Comment: Additional Requirements for Closed Vent Systems Are Not Needed

Further, even if a problem does exist, an independent third-party verification program is not a suitable solution. First, the types of individuals who have the necessary qualifications to serve as third party verifiers are employees of the companies that construct closed vent systems. Because this expertise is so narrowly held, there would be few, if any, options for truly outside verifiers. However, if third party verification were conducted by the vendors of control technology, those verifiers would not be fully independent and, as a result, would undermine the integrity of the program. Second, requiring vendors to conduct third-party verification of their own work would involve unnecessary expenses. EPA has not included these costs in its original cost analysis and it is not clear if the proposed requirements would still be cost effective if these additional verification processes were required. Thus, at a minimum, EPA must defer any imposition of third-party verification for closed vent systems until the appropriate cost analysis is conducted.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc.,

(C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 50

Comment: Fugitive Emissions Verification

We recommend that auditors and the company in which they are employed are complete without conflict (e.g., employees of parent company, affiliates, vendors/contractors that participated in developing source master plan(s) and/or site-specific plan(s), etc.) We do not recommend allowing a person at the facility itself who is a registered PE or who has the requisite training in conducting optical gas imaging monitoring to conduct the audit. Auditors must be outside of the facility operations. Auditors must not be rewarded with any financial or other incentives in regards to any aspects of the audits.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 48

Comment: Independent Third-Party Verification

We are strongly opposed to the EPA establishing a third-party verification program. Many operators practically as a rule employ the services of third party inspectors already. The oil and gas industry as a whole in large part is a major consumer of companies that offer these services. It would be at least a challenge if not impossible to find a company that doesn't contract with the oil and gas industry. That is a very major to concern to us. We know what happens when the industry employs their own third party inspectors; at times their own contracted inspectors are encouraged to look the other way, not to slow a job down, or are given so many tasks at unreasonable distances that they spend most of the day driving in their truck. On occasion a good, professional third party inspector becomes frustrated and requests a new assignment and moves on. We have a lack of confidence that the EPA contracting third parties with longtime business relationships with operators or in some cases operator's personnel - that the public's interest would be well served and protected. What we foresee with this concept is that the EPA would eventually have to employ another layer of third parties to verify the services of the originally contracted third party. This entire concept has the potential to be ineffective and waste taxpayer's dollars. We recommend the third party concept be removed from the rulemaking and rather the EPA craft a verification regulatory concept that would provide more regulatory boots on the ground. This could either be EPA or through EPA funded state agency partnerships.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 49

Comment: Fugitive Emissions Verification

The EPA is proposing an audit program of the collection of fugitive emissions components at well sites and compressor stations. We are opposed to an industry self-determined audit program. The industry as mentioned previously is a large purchaser of services from companies that routinely provide these services. There is concern over the actual independent nature of a firm that is dependent upon future contracts. While regulators do approve of contractors providing stack tests for example, still the regulator at least in Pennsylvania is provided adequate notice to be present during the tests. We'd prefer operators being charged an audit fee and then the EPA be involved with the selection of auditors whether they be staffs or contracted third parties. We do not recommend the operators have a direct line of interaction with service companies providing auditing services. We are very concerned about the independence of auditors and their subsequent reports.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Roy Rusty Bennett
Commenter Affiliation: Mehoopany Creek Watershed
Document Control Number: EPA-HQ-OAR-2010-0505-6816
Comment Excerpt Number: 13

Comment: We are strongly opposed to the EPA establishing a third-party verification program. Industry employs a number of third parties to provide for inspections. Long relationships with the operator and personnel, employees who formerly worked for the regulator now are working for the contractor all of these factor into a shadow of problems with independent verification. There is a greater trust value to have the EPA or state regulators responsible for verifications.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 55

Comment: A third-party or internal audit program should be optional for owners and operators. EPA should not prevent companies from conducting internal audits using competent and objective auditors.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 51

Comment: Any self-auditing done by operators needs to be considered with that bias. EPA and other regulators need to be in essence auditing such reports, not taking them at face value. Industry has too much invested in the audit outcomes. This needs to be recognized.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 45.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 28

Comment: The photographs taken during these monitoring events should not be made publicly available because they create unwarranted security risks and disclose confidential business information.

EPA is proposing to require documentation of each source of fugitive emissions, including photographs of each required monitoring survey being performed. We ask the EPA remove this requirement from the final rule because it creates administrative burdens on the industry without creating any additional compliance benefit. Even if there is some benefit to EPA in the agency itself being able to review these images at a later time, EPA has not provided a justification for making these images, and the information accompanying the images, publicly available. If EPA does not remove the requirement to keep images from the final rule, we recommend that the EPA modify the final requirement so that the information is not publicly available. Alternatively, we ask that EPA modify this requirement to avoid creating unnecessary security concerns for these facilities, or forcing businesses to disclose confidential business information.

Under the proposed NSPS, the photographs must include "the latitude and longitude of the well site or compressor station imbedded within or stored with the digital file." By requiring businesses to release location information about the specific locations of specific pieces of equipment at these sites, EPA would make these sites vulnerable to individuals interested in

sabotaging operations. These sites include products that are highly flammable and explosive when mishandled. Commentators have noted that "[a]ttacks on oil and gas installations have become the weapon of choice for international terrorism, irrespective of the political system and social-financial boundary conditions of the society under attack." By making information about the exact location of these facilities, EPA is creating a potentially grave security risk at these sites. This risk is increased when EPA forces companies to release information about the specific location of specific pieces of equipment. Due to the remote location of the sites, many of them are not manned during all hours, which could increase their vulnerability if certain organizations or individuals were given access to details about the site's configuration. With the string of recent terror attacks around the globe, this threat has grown increasingly serious. Any public benefit from recording and releasing this information is vastly outweighed by the public and environmental harm that could result from an attack on one of these facilities.

In addition, releasing this information would also allow potential competitors to determine the specific configuration of these sites. While no one picture may reveal the configuration of Enterprise's facilities, competitors could use these images, along with other publicly available information, to determine how Enterprise has configured its equipment in order to lower its operating costs. As a result, if EPA does require operators to take and submit photos, it should allow those images to be classified as confidential business information ("CBI"). While not specifically related to our operations, we also note that the Freedom of Information Act ("FOIA") explicitly exempts "geological and geophysical information and data, including maps, concerning wells." This exemption demonstrates a Congressional intent to keep business information related to well locations confidential. By requiring companies to release pictures that include latitudinal and longitudinal data for equipment at well sites, the proposed NSPS would violate this exemption by requiring companies to release map data concerning wells.

While we do not think the release of any site specific images to include latitudinal and longitudinal data is necessary or safe, if EPA does keep this requirement in the final rule, we propose that the pictures should instead use latitude and longitude data that relate to the center of the entire site, rather than a separate coordinate requirement for each fugitive emissions component, to help mitigate the risk.

Response: The intent of the requirement was to provide digital evidence that a monitoring survey had been performed, however we inadvertently included this requirement under the requirement for "each fugitive emission". It was not our intent to collect a picture of each fugitive emission. We have clarified this in the final rule. In order to provide a record for each monitoring survey, we are requiring that when OGI is used at least one digital photograph or video be taken during the monitoring survey and stored onsite or at the nearest field or district office for at least 5 years. This digital photograph or video must be captured with the OGI instrument and include the latitude and longitude of the well site imbedded within the photograph or video, but does not have to include specific locations of specific pieces of equipment. We believe these changes adequately address the commenters concerns about submitting photographs, as well as the availability of potential CBI to the public. See section VI.F.1.h of the preamble to the final rule for more information regarding this issue.

We also point out that the EPA is finalizing the requirement to report certain performance test reports, excess emission reports, annual reports and semiannual reports electronically through the EPA's CDX using the CEDRI. The EPA believes that the electronic submittal of the reports addressed in this rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability, will further assist in the protection of public health and the environment, and will ultimately result in less burden on the regulated community. Information submitted through the CEDRI will be available to the public.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 35

Comment: EPA Should Limit Public Access to Compliance Reports and Other Audited Information

EPA has asked for comments on whether, and to what extent, the public should have access to compliance reports, portions or summaries of them and/or any other information or documentation produced pursuant to the auditing provisions. EPA has suggested that disclosed data could include monitoring data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status, and third-party certifications. We understand that EPA has made this suggestion because it is concerned that the public, including investors and other key stakeholders, are not given enough information by companies related to companies' environmental practices.

Enterprise is opposed to EPA making the compliance and audit information publicly available. First, Enterprise does not believe EPA's goal of informing investors falls within EPA's core mission. EPA's role is to protect human health and the environment. EPA should not be in the business of protecting investors, and should concede such considerations to the agency with expertise that in that area—the Securities and Exchange Commission—to ensure that companies have made complete and accurate public disclosures about material aspects of their businesses. If investors wish to gain additional information about a company's environmental practices, then most companies have personnel in charge of investor relations who can supply this information. Investors and other key stakeholders can always request information directly from the company if they have particular concerns.

Second, Enterprise opposes the public release of any type of audit documents because doing so could incentivize personnel to cover up and hide potential compliance concerns out of fear of a public response. Audits are designed to find concerns before they grow into problems. In order to ensure that audits actually find, and companies actually address, compliance problems, there must be an atmosphere of confidentiality and trust among the auditors and company. When personnel learn that they will be rewarded, rather than punished, for finding areas of concern, then they will find and address these issues in the future. This helps to establish a culture of compliance within a company. In contrast, when personnel feel that an audit is just an

opportunity for an outsider to "ding" them for their work, or to tattle on them for their mistakes, then they are less willing to cooperate with the process.

By analogy, when Congress drafted the Freedom of Information Act ("FOIA"), it created exemptions from public disclosure for several classes of documents related to internal agency decision making. For example, FOIA exempts documents which are "related solely to the internal personnel rules and practices of an agency" and "inter-agency or intra-agency memorandum or letters" which would be privilege in civil discovery. When explaining the justification for the latter rule, the Supreme Court stated that the "deliberative process privilege rests on the obvious realization that officials will not communicate candidly among themselves if each remark is a potential item of discovery and front page news, and its objective is to enhance 'the quality of agency decisions' by protecting open and frank discussion among those who make them within the Government." Just as FOIA protects internal agency decision making because Congress believes that this will result in more open discussion and better outcomes, the proposed NSPS should likewise protect audit findings and compliance reports from public disclosure to ensure that companies are better able to find and address these concerns.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 38

Comment: GPA is also concerned that potential third-party verification programs and enhanced self-auditing programs could create significant problems if compliance data is made available to the public. In Section IV.E., GPA described a number of security and competitiveness concerns with making certain data available to the public and those concerns are applicable here. In addition, the types of disclosure that EPA discusses in the preamble would create both uncertainty and, in some cases, raise significant legal questions. For these reasons, GPA urges to limit, in particular, the types of raw data that would be made available to the public in any Next Generation compliance program.

As an initial matter, public disclosure of compliance data related to third-party verification should be limited to avoid confusion. The affected facilities that EPA proposes to regulate are complex and have multiple components that may be subject to regulation. Due to their complexity, some degree of variation between surveys is virtually certain to occur. As a result, publicly disclosing all compliance data from third-party audit surveys would create multiple challenges to EPA and to the owners and operators of affected facilities who must respond to public questions regarding such data. First, because there is no numerical limit on fugitive emissions data, a third-party audit will not clearly show whether a facility is in compliance with the rule or not. Thus, public disclosure may be of limited value. Further, to the extent there are minor discrepancies between an affected facility's reported data and the audit results, the public may mistakenly believe that an affected facility has violated the CAA or EPA's regulations. In

fact, some discrepancies are to be expected and may be explained by a number of factors. Thus, to the extent that third-party audit data is collected by EPA, GPA urges EPA to make it publicly available in summary form only so that the results can be accompanied by necessary explanatory information.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 53

Comment: Transparency and Public Access to Information Resulting From Potential Auditing Provisions (FR 56650)

"EPA seeks comment on whether, and to what extent, the public should have access to the compliance reports, portions or summaries of them and/or any other information or documentation produced pursuant to the auditing provisions. EPA is also considering the approach it should take to balance public access to the audits and the need to protect Confidential Business Information (CBI). To balance these potentially competing interests, EPA is reviewing a variety of approaches that may include limiting public access to portions of the audits and/or posting public audit grades or scores to inform the public of the auditing outcomes without compromising confidential or sensitive information. EPA seeks comment on these transparency and public access to information issues in the context of the proposed auditing provisions."

As stated above, API believes a requirement to use third-party auditing would exceed EPA's CAA authority, is unnecessary and any such program would face many changes to design and implementation. Even if EPA has the authority , it is necessary to include clear requirements in the rulemaking proposal regarding what information would be required to be submitted to the EPA or made available upon request.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 37

Comment: EPA seeks comments on whether, and to what extent, the public should have access to company compliance reports or similar information provided to EPA pursuant to EPA-mandated auditing provisions. EPA states that it is considering approaches such as requiring the public posting of company "audit grades" to inform the public of auditing outcomes, monitoring

data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status, and third-party certifications. Future EPA rules might also require owners/operators to make publicly available photographs of their facilities, *e.g.* in the fugitive monitoring survey/repair context.

The purported basis for such measures would be EPA's concern that the public, including investors, are not being given enough information by companies related to companies' environmental practices and performance. But EPA's rules should not extend to cover matters such as protecting information flow for the investment community - that is more properly the role of the Securities and Exchange Commission, and is one that the SEC has been actively pursuing for many decades. Moreover, if there is particular information that EPA believes should be more easily obtainable by the public, then EPA has the ability to publicize that data, as the agency has access to all reported information and the means by which to effectively distribute that information to the public in any manner that EPA believes to be appropriate.

EPA should also be aware of the security risk posed by adding so much information into the public domain. For example, rules that would require owners/operators to make publicly available photographs of their facilities, *e.g.* in the fugitive monitoring survey/repair context, could have an impact on plant security and heighten national security concerns. Such photographs might disclose competitively sensitive information or might disclose information about facilities that would be classified as critical infrastructure by the Department of Homeland Security. As previously noted, EPA should allow owners/operators to keep required photographic data on she and available for EPA review, rather than requiring such data to be sent to EPA or made publicly available. More broadly, EPA should tailor its public disclosure requirements so that regulated entities are not required to publicize data that could jeopardize competitive, safety, or national security interests.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 52

Comment: When considering public access of compliance reports, portions or summaries of them and/or any other information or documentation produced pursuant to the auditing provisions; it is our recommendation that all information be available to the public through internet/website access. Well sites and compressor stations have been sited very near our homes and schools with no consideration of public health issues. Therefore, it is only reasonable that we have full access to all compliance reports, portions or summaries of them and/or any other information or documentation produced pursuant to the auditing provisions since health risks have increased since harmful VOCs are now emitted near, in measureable feet from our homes and schools. The public has the interest and is a relevant stakeholder, we want to know what we

are being exposed to, how well the operator is complying with regulations and best practices to minimize fugitive releases of harmful VOCs and potent methane.

Providing audit grades and scores to inform the public is also a worthwhile addition. Grades and scoring must be thoroughly defined in order that the reader has a good understanding of the grade/scoring system. Grades/scores must be available on a facility, municipality, county, state and national level. In other words, if one was to review the grade/score regarding the facility next to their home, they may also be interested in how the operator scored with other facilities within their municipality, county or state. They also may be interested in the cumulative grade/score across entire regions, state or nation for comparison. For example, if the operator scored a "D" at the facility near one's home, they may be interested in reviewing other scores the operator has been awarded for other facilities nearby, a cumulative/average score for facilities within their municipality/county/state. Also average 'industry-wide' grade/scores for comparison may also be relevant. We foresee someone reviewing the facility near their home and seeing a "D" score may want to know whether this is an oddity or the normal outcome for the operator. We recommend all the aforementioned possibilities to be incorporated within a grading/scoring system.

Again, when industry ramped up and sited well sites and facilities measureable feet from our homes and schools, they also signed up to be closely scrutinized at those locations. In many, many cases, the neighbors had no input on any aspect of the siting of the well pad or compressor station. In many cases, they have no interaction with the operator, no contact person, no one to ask questions to or express their concerns. Therefore, the burden now falls upon the regulator to create a framework to consider the nearby families, their public health risks and corresponding needs. Often families are living around a cluster of gas industry activity and facilities. Regulations need to be attuned to the increased public health risks associated with harmful VOCs emitted near our homes and schools.

Industry too often cries foul or proprietary information whenever the public is requesting basic information concerning potential harms that may develop near or within their communities, with their water, air and land resources. Concerning fugitive emissions and the control of them, it is unimaginable what could possibly need to be confidential. If an operator has a better way to control fugitives, all industry and the public are potential benefactors, there is no reason for protecting such information as confidential when so many may benefit. When an operator does not want to disclose harmful emissions; that is an egregious assault on the public's health and right to know. Harmful VOCs being emitted in unknown quantities near homes and schools are the concern of many folks. We also want to know exactly what these VOCs are, not just a generalized category. Well sites, compressor stations all sited lacking any consideration towards the public health of the neighbors, those vulnerable to degraded air quality and the community at large are worthy of having access to this information. When operators chose irresponsibly in some cases to site facilities incredibly close, they also agreed they would be subjected to future regulation and scrutiny. It is the same logic that is applied over and over in society to aggressors, once they violate the public trust, whether it is drunk driving, malpractice, or abuse there are common sense laws and penalties applied to monitor the culprit and protect those affected by the situation. The public trust has been violated, these sites have been placed incredibly close and the public has been misled regarding risk issues, because to this day, we've still not been provided

with clear-cut, accurate information as to what the risks are living and attending school measureable feet from well sites and compressor stations within areas of shale gas development.

Therefore, we recommend all information be available to the public including availability via internet access.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Bill Thompson, Chairman
Commenter Affiliation: National Tribal Air Association (NTAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6705
Comment Excerpt Number: 10

Comment: For the Proposed Rule, EPA asks whether two types of information regarding new and modified oil and natural gas facilities should be made publicly available. First, EPA asks whether, and to what extent, the public should have access to the compliance reports, portions or summaries of them, and or any other information or documentation produced pursuant to specified auditing provisions. Second, EPA asks whether owners and operators of affected facilities should be required to report quantitative environmental results on their corporate maintained websites. Such results might include monitoring data, quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in a rule, and third-party certifications.

The NTAA recommends that both types of information from new and modified oil and natural gas facilities be made publicly available to help keep these facilities accountable to Indian Tribes and others impacted by the VOC and methane emissions from such facilities.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 8

Comment: EPA should allow companies to protect sensitive information through the use of Confidential Business Information (CBI) claims. We support EPA's use of a reporting framework similar to that of the GHGRP or the Chemical Toxic Release Inventory (TRI), the reporting should allow the explicit marking of Confidential Business Information (CBI) for exclusion from public knowledge and public websites in recognition of security and other considerations. We also urge the EPA to reconsider making publicly available specific compliance information at this time (e.g. compliance methodologies, deviation/excess emission

events, corrective actions, third-party certifications, etc.). We request that only quantitative annual emissions be reported to the public at this time.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6807, Excerpt 28.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 54

Comment: We recommend audits on an 18 month basis, unless the source has a poor audit result. If they receive less than a passing grade, then we recommend follow-up audits on a six month schedule until the problems are corrected and the source has three consecutive good scores.

Response: The EPA is not finalizing the proposed requirements for auditing of fugitive emissions monitoring programs.

11.5 Compliance with State Requirements

Commenter Name: Steven A. Buffone
Commenter Affiliation: CONSOL Energy Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6859
Comment Excerpt Number: 14

Comment: EPA has solicited comment on how to determine whether existing state requirements (i.e., monitoring, record keeping, and reporting) would demonstrate compliance with this federal rule. EPA is also soliciting comment on criteria they can use to determine whether and under what conditions well sites and other emission sources operating under corporate fugitive monitoring plans can be deemed to be meeting the equivalent of the NSPS standards for well site fugitive emissions, such that we can define those regimes as constituting alternative methods of compliance or otherwise provide appropriate regulatory streamlining. They solicit comment on how to address enforceability of such alternative approaches (i.e., how to assure that these well sites are achieving, and will continue to achieve, equal or better emission reduction than our proposed standards).

- CONSOL would suggest that the EPA contact applicable state regulatory agencies in Ohio, Pennsylvania, and West Virginia. These states have either existing or proposed regulatory requirements that meet or exceed the proposed federal requirements with regards to fugitive emission monitoring and associated repair programs. CONSOL would also point out that many oil and natural gas operators have undertaken voluntary emission reductions through participation in programs such as the CSSD, by adhering to their Air Performance Standards or by implementing best management practices (BMPs). These standards apply to unconventional exploration, development, and gathering activities including site construction, drilling, hydraulic fracturing and production in the Appalachian Basin.
- The CSSD Performance Standards were developed to drive leading industry practices and to set a bar that goes above and beyond the regulatory requirements established by Appalachian states (specifically, Pennsylvania, Ohio and West Virginia) and the federal government. The goal is to ensure that each performance standard, on the whole, requires a level of environmental performance that exceeds the regulatory minimums established by the states and the federal government. CONSOL believes that certification through a non-profit organization such as the CSSD would meet the equivalent of the NSPS standards for well site fugitive emissions an alternative method of compliance and would provide regulatory streamlining. Enforcement could be through the CSSD auditing process by submittal of the CSSD certification documentation. However, this option should only be considered in lieu of potentially expensive record keeping and reporting requirements at the state of federal level. To require third party verification as an additional step to either state or federal requirements would be overly burdensome to the oil and natural gas operator

Response: We appreciate all the comments we received concerning compliance with state regulations that are similar to the standards in subpart OOOOa. We found the comments to be very helpful to explain the issues faced by stakeholders. The final rule is designed to complement current state and other federal regulations. We carefully evaluated existing state and local programs when developing these federal standards and attempted, where practicable, to limit potential conflicts with existing state and local requirements. However, we recognize that in some cases these rules require more stringent regulatory provisions and in other cases may be less stringent than current state rules. After careful consideration of all of the comments, we are finalizing the standards with revisions where appropriate to expand the source category, promote gas capture and beneficial use, and provide opportunity for flexibility and expanded transparency in order to yield a consistent and accountable national program that provides a clear path for states and other federal agencies to further align their programs. See section III.E of the preamble to the final rule for more information regarding this issue.

Commenter Name: Wesley D. Lloyd, Freeman Mills PC
Commenter Affiliation: Texas Independent Producers and Royalty Owners Association (TIPRO)
Document Control Number: EPA-HQ-OAR-2010-0505-6893
Comment Excerpt Number: 8

Comment: EPA Should Defer to State Regulators

Texans trust the agencies that regulate the oil and gas industry and the environment. The three Commissioners of the Texas Railroad Commission (which regulates oil and gas production and transportation) are elected in statewide races to fill their positions. If the public feels unduly harmed by a lack of proper oversight, they have the power to make change. The three commissioners of the Texas Commission on Environmental Quality are appointed by the Governor, and are therefore similarly subject to election results.

Regulatory oversight of local activities should be handled, when possible, by local regulators. The Clean Air Act was designed with that goal in mind, giving states flexibility on how to achieve larger air quality goals. In this situation, Texans in particular are impacted by the success or failure of the oil and gas industry more than the citizens of any other state. Therefore, it should be up to them and state regulators to decide how to prioritize emissions amongst different industries in order to achieve air quality goals. A blanket federal program regulating the oil and gas industry might have a minimal impact on the economies of other states, but in Texas the industry's importance to our economy exacerbates the impact.

Further, compliance with dual regulatory programs handed down by different state and federal agencies only serves to increase the burden on small business with little environmental benefit.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Glenn Prescott
Commenter Affiliation: RK Petroleum Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6788
Comment Excerpt Number: 47

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: W. Jeffrey Sparks
Commenter Affiliation: Discovery Operating, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6790
Comment Excerpt Number: 47

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Josh W. Luig
Commenter Affiliation: Veritas Energy, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6797
Comment Excerpt Number: 48

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Rick D. Davis, Jr.
Commenter Affiliation: Midland Energy, Inc. and Petroplex Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6801
Comment Excerpt Number: 47

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: W. Michael Scott, General Counsel
Commenter Affiliation: Trilogy Operating, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6603
Comment Excerpt Number: 53

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Bradley C. Cross, President/Partner
Commenter Affiliation: Big Star Oil & Gas, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6757
Comment Excerpt Number: 46

Comment: EPA should create a mechanism by which it can review the regimes in individual states and grant exemptions to facilities within those states that are in compliance with state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 102

Comment: As a general matter, state compliance requirements used to demonstrate compliance with the federal standards must be straightforward to ensure public health and environmental benefits. A few leading states have established state substantive requirements that are more stringent than the proposed federal standards. Affected facilities in compliance with these more stringent state requirements may also be in compliance with EPA's proposed standards. EPA solicits comments on how it should determine whether the state compliance demonstrations (*i.e.*, monitoring, record keeping, reporting) also demonstrate compliance with the federal standards.

EPA's determination must be governed by whether the state requirements demonstrate reductions that are at least equivalent to those that will be achieved under the federal rules. The Act is clear that when a person seeks to use an "alternative means" in lieu of the federal work practice standard established under section 111(h)(1), that person must establish that the alternative will "achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such air pollutant" under the federal standard. 42 U.S.C. § 7411(h)(3).

Many of the work practice standards EPA has proposed allow such a comparison. For the federal performance standards (*i.e.*, those that have numerical emission limits), EPA's determination should be straightforward. To ensure compliance with the federal rule, a state's requirements must demonstrate that at least the same emission performance is achieved within the state. For example, if the federal performance standard is a 95.0 percent reduction of methane, then the state requirements to demonstrate compliance must show that at least 95.0 percent of methane is reduced from the affected facility.

However, the structure of EPA's proposed leak detection and repair (LDAR) requirements does not readily allow for an evaluation of equivalent reductions. As discussed above, emissions – and thus the achievable reductions – from leaking components are not correlated to the percentage of leaking components. In fact, a single leaking component could be responsible for an enormous amount of pollution. Accordingly, we urge EPA to strengthen LDAR provisions, as we describe more fully above, to be more aligned with state programs that lack these frequency adjustment provisions. Doing so will secure critical environmental benefits and likewise help facilitate more ready comparison (and recognition) of states with leading programs.

For work practice standards associated with well completion events, pneumatic pumps, and centrifugal compressors that require routing to certain combustion devices, the state requirements must ensure that the devices achieve 95 percent reduction of the VOC and methane that is captured. *See* TSD at 30 (completion combustion devices for well completions are assumed to achieve an average of 95 percent reduction), 162 (estimating 95 percent reduction for combustion devices associated with pneumatic pumps), 192 (assuming 95 percent reduction for centrifugal compressors with wet seals).

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Josh W. Luig
Commenter Affiliation: Veritas Energy, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6797
Comment Excerpt Number: 49

Comment: EPA should consult with its state counterparts to determine ways to ensure that the Methane NSPS is not unnecessarily duplicative of state requirements, and does not create conflicts with existing state requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 16

Comment: The CAA is structured such that states should have primacy and be primarily responsible for compliance with the requirements of the Act. Many of the states with the most active shale plays have implemented state regulations to address many of the emissions sources targeted in the proposed Subpart OOOOa regulations. States with state permitting programs and/or State Implementation Plans (SIPs) that contain limits on sources that are legally and practically enforceable should be deemed sufficient for overlapping and duplicative requirements in Subpart OOOO and the finalized version of Subpart OOOOa. EPA should defer to existing state regulations to the greatest extent possible to deem compliance with state regulations on the same sources as constituting compliance with the final Subpart OOOOa regulations. Duplication and inconsistency between state and federal regulations simply add to the cost of compliance with little to no additional benefit to the environment. To the extent EPA does not allow for such provisions, EPA should demonstrate that the duplicate or "more stringent" regulations that EPA is promulgating are incrementally cost-effective: meaning that the cost associated with the duplicative or inconsistent federal control requirement is cost-effective based on the incremental environmental benefit above the state regulation already in place or deem compliance with the state regulations as compliance with Subpart OOOOa. EPA must justify with an *incremental* cost and benefit analysis any proposal to impose additional federal regulations that it deems more stringent than existing state regulations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337
Comment Excerpt Number: 9

Comment: The Colorado Petroleum Association has had an ongoing and involved dialogue addressing issues and concerns that have arisen, through its members, with the Air Division in Colorado over the last 18 months concerning Regulation 7. As a result of those efforts undertaken in Colorado in 2014, implementation has not been as significant, and there's been substantial steep learning curve for all -- for all players. EPA must learn from these hiccups and efforts in Colorado, or else similar difficulties will arise on a national scale.

As EPA evaluates the potential regulation, we strongly urge the Agency to acknowledge those states, like Colorado, have adopted robust and significant state regulations related to oil and gas, and in Colorado's case, methane, though implementation remains ongoing and challenges continue.

Operators have devoted vast amounts of money, resources and personnel to understanding and complying with engaging on Regulation 7. Though CPA and its members remain in an -- in an evaluation mode, there are many components of this proposed regulation that either conflict with, duplicate, or show themselves to be inconsistent with the Colorado Regulation 7.

Because Colorado's program will achieve all the necessary goals and requirements of EPA's proposal, Colorado's program should be able to stand in lieu of EPA's proposal. A long compliance with Regulation 7 in Colorado will not hinder the efforts of achieving improved air quality. In fact, CPA members have worked throughout the world to improve their operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2010-0505-6854
Comment Excerpt Number: 10

Comment: State Compliance Programs: Certain requirements that are state enforceable, either through regulations or permits, should be considered adequate for compliance with any final NSPS OOOOa. EPA should periodically publish a list of state or local rules, permits and programs that are approved as an alternative to meeting fugitive emissions standards for well sites and compressor stations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Steven A. Buffone
Commenter Affiliation: CONSOL Energy Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6859
Comment Excerpt Number: 18

Comment: EPA is soliciting comment on how to determine whether existing state requirements (i.e., monitoring, record keeping, and reporting) would demonstrate compliance with this federal rule.

- CONSOL believes that existing and proposed regulations in Pennsylvania, Ohio, and West Virginia will meet and demonstrate compliance with the proposed federal rule. Additional requirements for monitoring, record keeping, and

reporting in these states would be unnecessary and overly burdensome to the oil and natural gas industry.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 3

Comment: Existing State Requirements

We request that EPA allow sources the ability to utilize compliance with existing state regulations as a surrogate for compliance with this rule – insofar as existing state requirements accomplish the same health and environmental benefits of the final rule. EPA has requested specific comments on a variety of aspects in the proposed rule. One central topic centers upon how to determine whether existing state requirements (e.g. monitoring, record-keeping, and reporting) could be used to demonstrate compliance with the proposed rule. Should any uncertainty exist in stringency, the final rule should allow the ability for sources to negotiate with the state and regional EPA office on a case-by-case basis.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 57

Comment: We also urge EPA to accommodate operators that are currently implementing leak monitoring and repair requirements, whether due to existing air permits, state regulations, or voluntary commitments, to satisfy the federal rule requirements and minimize additional regulatory burden for these operators.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado

Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337
Comment Excerpt Number: 165

Comment: We also strongly support flexibility across the entirety of these regulations. This would include flexibility in how monitoring and repairs are accomplished, and, perhaps most importantly, a codified recognition that compliance with a stringent state LDAR program should be deemed compliance for federal rules.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 110

Comment: We also urge the EPA to accommodate operators that are currently implementing leak monitoring repair requirements, whether due to existing air permits, state regulations or voluntary commitments to satisfy the federal rule requirements and minimize regulatory fines for

Response: See response to DCN EPA-HQ-OAR-2010-0505-6859, Excerpt 14.

11.6 Recordkeeping

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 60

Comment: EPA proposes recordkeeping requirements that are simply excessive, burdensome, and unnecessary. To summarize EPA's proposals: EPA would require (1) submission of detailed annual reports; (2) corporate fugitive emissions monitoring plans; (3) site-specific monitoring plans; (4) third- party verification requirements; (5) mandatory audits related to fugitive emissions verifications (to be performed by third parties); and (6) publication of "qualitative environmental information" on company websites. No other regulatory program requires such extensive burdens on the regulated industry, including NSPS KKK and OOOO. EPA has offered no rationale why NSPS OOOOa rises to the level of requiring these expansive and onerous recordkeeping and reporting requirements. It disappoints Kinder Morgan—one company among others that has and continues to work collaboratively with EPA to successfully implement voluntary emissions reductions programs—to find excessive administrative burdens that offer no environmental benefit. These requirements are unnecessary for the reasons discussed below and should be eliminated.

Response: The EPA is sensitive to the commenters' concerns about the level of burden the final rule places on the regulated community. In response to these comments, we reviewed the proposed rule to determine if there are areas where this burden could be reduced. One such area, which we believe will provide a substantial burden reduction, is the proposed corporate-wide and site-specific monitoring plans. In the final rule, we are replacing the proposed corporate-wide and site-specific monitoring plan requirements with a requirement for owners or operators to develop a corporate monitoring plan for each company-defined area that would cover the collection of fugitive emissions components at the well sites or compressor stations located within that company-defined area. This will allow owners and operators flexibility in developing monitoring plans for well sites and compressor stations by allowing owners and operators to determine which company-defined area can be covered under the specifications outlined in one monitoring plan, for ease of implementation and compliance.

We did not finalize proposed requirements for third-party auditors and verification. We did finalize the proposed electronic reporting requirements which we believe will ultimately reduce the time required to prepare and submit annual reports.

We also reviewed other recordkeeping and reporting requirements throughout the rule to assure that they are the minimum necessary to verify compliance. In response to comments that the EPA underestimated the recordkeeping and reporting burden, we revised the ICR and Supporting Statement (available in the docket) for the final rule to more thoroughly document this burden. In the end, we believe the burden imposed by the final rule is reasonable. A summary of the estimated burden is presented in section X.B of the preamble to the final rule.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 35

Comment: As stated above, this proposed regulation will require a weighty amount of documentation by all owners/operators. We are expecting that this regulation will require us to hire additional staff personnel that will be dedicated to maintaining documentation for this regulation; and additional staff personnel may be required to complete field work.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Urban Obie O'Brien
Commenter Affiliation: Apache Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6808
Comment Excerpt Number: 7

Comment: Burden of Reporting. Notification and Record Keeping Requirements: Proposed reporting, notification and record keeping requirements are outlined in §60.5420a. Apache has determined that certain of these reporting and recordkeeping provisions place an undue burden on operators. Based upon our own operations, the recordkeeping and reporting requirements for §60.5413a, 60.5416a, 60.5397a and other sections necessitates the mandatory creation of a significant management and reporting system that does not already exist. As further described in Paragraph B of our Section Specific Comments below relating to Reporting, the cumulative effect of the reporting requirements on Apache's current operations would require over 330,000 reports per year.

Apache sees no purpose or value added in producing and archiving volumes of written inspection reports and believes that burdensome record keeping requirements should be removed. The requirement to report on each individual inspection serves no useful purpose and significantly adds to the paperwork burden of the wellsite operators and the field offices.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: C. William Giraud
Commenter Affiliation: Concho Resources Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6847
Comment Excerpt Number: 14

Comment: EPA is requiring an operator to show initial compliance, but in order to do so, an operator must submit annual reports for all well-affected facilities, reciprocating compressors, pneumatic controllers and pneumatic pumps; and maintain a log for each well completion. For a

company such as Concho that operates more than 6,000 wells in the Permian Basin, compiling this initial compliance data will require a significant amount of time and cost.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 14

Comment: We believe that EPA has underestimated the annual burden for recordkeeping and reporting requirements in NSPS subpart OOOOa. Information provided below shows that we are estimating our compliance cost to be significantly more than the estimates provided by EPA. Estimates provided are based on our current understanding of how the regulation will impact our industry.

As stated above, EPA requires digital photos and reports to be stored for up to five years. Development of a data management system, purchasing of additional data storage systems, and user training will require greater than 250 man hours. At a fully loaded cost (salary and benefit) of $40 per hour, our cost to develop an IT solution is estimated at $10,000. This cost is based on our best judgment of the man hours required as we understand the proposed rule; and does not include equipment costs necessary to achieve compliance. These man hour estimates are also included in our reporting estimates because the systems are mandatory to meet EPA's reporting requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: W. Michael Scott, General Counsel
Commenter Affiliation: Trilogy Operating, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6603
Comment Excerpt Number: 15

Comment: EPA's estimates on the cost of labor for compliance are also wholly unreasonable. The Methane NSPS is a highly complex and technical rule with a number of overlapping requirements. Upstream oil and gas operations frequently fall beneath the air emissions thresholds for permitting requirements. As a result, this portion of the industry has not historically been subject to similar federal air regulations, and their staff is largely unfamiliar with the monitoring, reporting, and recordkeeping requirements that accompany such rules. This means that these entities will have to expend far more resources either training their own personnel, or hiring personnel with expertise in federal air regulatory matters. This is particularly true for operators in states that already have overlapping state air regulations, as the businesses will need to understand and convey to personnel the differences between the two sets of

requirements. For example, the Texas Railroad Commission places limits on the venting or flaring of gas, and Colorado, Wyoming, Ohio, and Pennsylvania have state regulations regarding natural gas emissions and leaks. Differentiating between the requirements from state and federal regimes—particularly when those requirements conflict or overlap—will take additional time and resources.

For most upstream companies, well sites are spread out over a large geographic area. This dispersion of activities across a large geographic area is significantly different from the physical set up of larger facilities, such as natural gas processing plants or refineries, where EPA has imposed these kinds of monitoring requirements in the past. Unlike those larger sites, which have full-time personnel dedicated to one particular facility, most E&P companies assign one employee to multiple small sites. Well sites simply do not have the concentration of activity (including activity that would give rise to air emissions) to justify dedicating a single air compliance employee to each well site. Instead, the air compliance employee will have to spend substantial amounts of time traveling in order to visit each site semi-annually or quarterly, and will then have to keep up with the continual recordkeeping and reporting requirements for each of these small sites. Trilogy estimates that operators will need to hire one full-time employee or contractor dedicated to implementing the requirements of the Methane NSPS for every 25 affected well sites operated. Given that there are almost 200,000 producing wells in Texas alone, this means the industry will eventually need to hire thousands of new employees merely to track and fix small equipment leaks.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Clement J. Frost, Chairman
Commenter Affiliation: Southern Ute Indian Tribe Council
Document Control Number: EPA-HQ-OAR-2010-0505-6446
Comment Excerpt Number: 5

Comment: The Tribe recommends that the compliance period for recordkeeping and reporting be set to a calendar year. EPA is proposing that the initial annual report is due according to the existing schedule in 40 CFR Part 60, subpart OOOO. The current regulations base the initial compliance period, initial report, and subsequent annual reports, on the startup date of the effected facility (§60.5410). This reporting schedule creates two potential issues. First, having multiple reporting schedules creates an unnecessarily complicated compliance scenario for companies. Second, multiple reporting schedules will create the requirement for conflicting reporting and emission calculations between Subpart OOOOa and Subpart W (i.e., annual emissions calculated from October-September under Subpart OOOOa, and from January-December under Subpart W). In an attempt to reduce the reporting and recordkeeping burdens between NSPS and Subpart W, the Tribe recommends that the compliance period be set to a calendar year. This will align both the emissions calculations for methane and the reporting for Subpart W and OOOOa. It will also allow operators to calculate methane emissions for a facility once, using a single calculation methodology (assuming that EPA aligns the two regulations to allow for this).

Response: In §60.5420a(b) of the final rule, we have provided that:

> Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

We believe this provision provides adequate flexibility for choosing a date for submitting the annual report.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 48

Comment: Recordkeeping Requirements for Combustion Control Devices Tested by the Manufacturer Are Not Reflected in 40 C.F.R. §§ 60.5420 or 60.5420a.

In Subpart OOOO and in the proposed rule, EPA would require that "[a]ll repairs and maintenance activities for each unit must be recorded in a maintenance and repair log and must be available for inspection." 40 C.F.R. § 60.5413(e)(4); 60.5413a(e)(4). However, this additional recordkeeping requirement is not reflected in 40 C.F.R. § 60.5420(c) or 60.5420a(c). This recordkeeping requirement should be added to the recordkeeping sections of the rule to maintain rule consistency and clarity.

Response: The commenter is incorrect that §60.5420a does not include these requirements. The records of the maintenance logs can be found at §60.5420a(c)(2)(vi)(C) for compressors, and at §60.5420a(c)(5)(vi)(F)(*3*) for storage vessels.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 24

Comment: Electronic Reporting

Issue – EPA should not write electronic reporting into Subpart OOOO and Subpart OOOOa until the system is able to accommodate the unique nature of the oil and natural gas industry. The electronic reporting system is not proven generally at this time. Further, the system will require configuration to allow the current area based reporting vs facility by facility. In the past, system revisions have resulted in significant IT challenges, and appropriate time needs to be allowed for the agency to develop, QA/QC, user test and train reporters on the new system.

Recommendation – EPA should amend the final rule language to formally allow for continuation of current reporting approaches (under Subpart OOOO) for three years to allow for rollout of the electronic reporting system.

EPA Should Not Require the Use of Electric Reporting Under Subpart OOOO and Subpart OOOOa

On March 20, 2015, EPA proposed the "Electronic Reporting and Recordkeeping Requirements for New Source Performance Standards'' (80 FR 15099, March 20, 2015). EPA should not require the use of electronic reporting under Subpart OOOOa since the system is not yet established and application of EPA's Compliance and Emissions Data Reporting Interface (CEDRI) to the oil and natural gas industry has unique challenges.

As mentioned in our June 18, 2015 comment letter on EPA's proposed requirements for electronic reporting, the proposed electronic reporting approach is in conflict with Subpart OOOO (and proposed Subpart OOOOa) requirements. As a result, a requirement to use EPA's electronic reporting tool should not be finalized at this time. Given the overlapping relevance to the unique challenges under Subpart OOOOa for electronic reporting, a copy of our June 18, 2015 comments is included as Attachment B.

EPA is proposing that the annual reports required by this Subpart be submitted through CEDRI starting 90 days after a template is available. Because of the unique operations of this industrial category, we see several problems with applying CEDRI as proposed, and API requests that these concerns be resolved before these new requirements are finalized for Subpart OOOO or Subpart OOOOa.

Under this proposal the Subpart OOOO and Subpart OOOOa annual reports required by §60.5420(b) and §60.5420a(b) respectively must be submitted electronically once a template is available. Under Subpart OOOO and Subpart OOOOa, each regulated item is treated as a separate affected facility; however, they are reported together in the annual report. The individual affected facilities are identified in the annual report in different ways (often by their latitude and longitude) but not necessarily by the site where they are located, since there often is no site address and the affected facility (e.g., well) may be the only thing at that location. That is why Subpart OOOO does not require that all types of affected facilities be linked with a particular site (e.g., Subpart OOOO requires wells and storage tanks be identified by their longitude and latitude).

As we understand it, the CEDRI system links reports to the site at which they are located. Identifying each site separately in CEDRI would require deconstruction of the annual report as currently specified in Subpart OOOO (a change which was not proposed), imposing very large unjustified burdens that have not been considered and that are inconsistent with the promulgated reporting requirements of Subpart OOOO. For instance, one member company reports they have approximately 8,000 such sites and another member reports upwards of 20,000 sites. Although not all of the sites currently require reporting under Subpart OOOO, there may be hundreds of thousands of sites in petroleum upstream operations as new wells are drilled and new equipment is added to existing sites.

The CEDRI requirement to link every affected facility to a site could therefore require thousands of reports and responsible official certifications for each current Subpart OOOO report.

API, therefore, requests that the CEDRI system be modified to accept Subpart OOOO and OOOOa annual reports as currently specified in §60.5420 of Subpart OOOO and not require linking the reports to particular sites and that the proposed amendments of Subpart OOOO and Subpart OOOOa not be finalized until those revisions are completed.

Subpart OOOO and Subpart OOOOa require that the annual report be certified, as does the CEDRI system, however, these Subparts have a specific definition of "certifying official" that is different from the definition on the CEDRI webpage, and API therefore requests that the final revision to Subpart OOOO clarify that the certifying official for CEDRI reports is the one defined in §60.5430 of Subpart OOOO and §60.5430a of Subpart OOOOa. Furthermore, no additional certifications should be required than are currently required by Subpart OOOO or Subpart OOOOa without notice and comment rulemaking that addresses this specific issue.

For these reasons, API asks that EPA make CEDRI system and Electronic Reporting Tool (ERT) allowed alternatives to submitting hardcopy or PDF reports, at least for several years, until all of the operability and integration issues can be resolved.

As part of time afforded under a phase-in approach discussed above, API is committed to work with EPA on mechanisms to efficiently enable use of the CEDRI system for the oil and natural gas industry (e.g. develop mechanisms to support reporting of multiple affected sources at a time as is currently done on a regional basis by operators).

Response: In the final rule, we have clarified that if the CEDRI form is not available at the time that a report is due, we do not intend for owners or operators to submit forms electronically through CEDRI until the form has been available for at least 90 days. The EPA is currently working to develop the form for subparts OOOO and OOOOa. The EPA notes that we have recently developed a bulk upload feature for several subparts within CEDRI. The bulk upload feature allows users to enter data for sites across the country in a single file instead of having to submit individual reports for each site. This feature should alleviate some of the commenter's concerns.

The EPA has previously implemented similar electronic reporting requirements in over 50 different subparts within parts 60 and 63. WebFIRE currently houses over 5000 reports that have been submitted to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX). As such, we believe the system is proven.

See sections VI.J.1 and VIII.H.1 of the preamble to the final rule for more information regarding this issue.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association

Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 79

Comment: EPA solicits comment regarding how records should be made accessible for review:

> Consistent with the current requirements of subpart OOOO, records must be retained for 5 years and generally consist of the same information required in the initial notification and annual reports. The records may be maintained either onsite or at the nearest field office. We solicit comment on whether these records also should be sent directly to the permitting agency electronically to facilitate review remotely.

TXOGA opposes sending records directly to the permitting agency electronically to facilitate remote review. There is no basis for companies to be required to "resubmit" information that is already being submitted. Accordingly, we would not support EPA's suggested electronic reporting of records at this time. Subpart OOOOa should determine when E-reports are required. The problem with the EPA's electronic reporting tool is that it is on a site-by-site basis, which is not well suited to Subpart OOOOa regulated sites, since they need to be able to submit reports on an area-wide basis. Many of TXOGA's members are smaller companies that are simply not in a position to bear the costs of this reporting. Moreover, the existing conflicts between state and federal reporting requirements will exacerbate this burden. Only the essential reports should be required to be submitted and then only one time. Finally, state permitting authorities are already overwhelmed with materials and the cost of maintaining this information will be a high burden for state agencies and for EPA. Moreover, EPA has not included the costs of this in its analysis nor has it provided regulatory language. Therefore, issuing a final rule on this issue would require another round of notice and comment to allow for meaningful comment on the method and degree of any submittal requirement.

Response: The EPA is not requiring digital pictures and logs to be sent directly to the permitting agency in the final rule.

As for other electronic reporting, a number of air agencies have already indicated their intention of adopting the EPA's electronic reporting program. We believe that more air agencies will eventually adopt the system, as the system benefits air agencies by streamlining review of data, facilitating large scale data analysis, providing accessibility to reports anywhere reviewers have access to the Internet, and providing cost savings through a reduction in storage costs. The narrative and upload fields within the CEDRI forms can be used to provide information to satisfy extra reporting requirements that states and local air agencies may impose. Additionally, where air agencies will not accept an electronic report, reports in CEDRI can be printed once they are completed; these printed reports provide a cost-effective option for satisfying a state or local air agency's request for a printed report.

See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24 for more information regarding this issue.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 180

Comment: In the preamble, EPA states:

"...a primary concern is that an owner or operator would install a control device, and not conduct a performance test, claiming that they installed a device listed on the Oil and natural gas page. We believe that we can build on the success of GIS imbedded digital photos for green completions (''REC PIX''), already in the rule, by developing a similar requirement for installed manufacturer tested control devices. Enhancing the records and reports by requiring specifics of the control device (make, model and serial number) and requiring the digital picture, will allow us to match a particular control device at a specific location with control device models listed on the Oil and natural gas page. Having this information electronically reported to CEDRI will further enhance our ability to evaluate compliance with the rule."

API questions the success EPA claims regarding the use of GIS imbedded digital photos for green completions (''REC PIX''), already in the rule. Many API member companies are not utilizing the photo – an optional approach for recordkeeping – for affected gas wells. API disagrees strongly with EPA's assertion that widespread misrepresentation by industry is or will be a problem. EPA is adding burden when they will not gain any more benefit from requiring a photo versus seeking submittal of the make and model of the control device.

EPA further states:

"While we are soliciting comment on third-party reporting by combustor vendors directly to the EPA, we propose to require that owners or operators include information regarding purchase of a pre-tested combustor model in their Notice of Compliance Status as part of the first annual report following the compliance period in which the combustor commences operation. The information would include (1) make, model and serial number of the purchased device; (2) date of purchase; (3) inlet gas flow rate; (4) latitude and longitude of the emission source being controlled by the combustor; (5) digital GIS and date stamp-imbedded photo of the combustor once it is installed; and (6) certification of continuous compliance. The owner or operator would be required to submit information to CEDRI in lieu of a field performance test."

The above statement is misleading; the use of the photo is optional, consistent with the reduced emission completion option. The proposed rule includes the following language under §60.5420a(c)(5)(vi)(G):

"As an alternative to the requirements of paragraph (c)(5)(vi)(D) of this section, you may maintain records of one or more digital photographs with the date the photograph was taken and the latitude and longitude of the storage vessel and control device imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital photograph, the digital photograph may consist of a photograph of the storage vessel and control device with a photograph of a separately operating GIS device within the same digital

picture, provided the latitude and longitude output of the GIS unit can be clearly read in the digital photograph."

Response: See section VI.J.2 of the preamble to the final rule for more information regarding this issue. The EPA has retained the language of the photograph being an alternative, as noted in the comment.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 82

Comment: The obligation that the EPA require digital photo documentation with embedded GPS and date or pictures of such devices, necessitates an intrinsically safe camera, and goes far beyond any other requirement for Title V emitting facilities. The photographic documentation is onerous and excessive, as is always the case, regulators are free to inspect operators flow-back activities at any time should they seek to do so.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 180.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 36

Comment: We believe that the owners and operators that are responsible for compliance with this regulation should be responsible to collect and store all of the required compliance records. We don't believe that the records should be sent to permitting agencies electronically, this will protect our company information. EPA may be required to release our information to requesting parties, such as the media, through Freedom of Information requests (FOI). We believe that this compliance information is only intended for the regulated parties and regulating agencies to review. By the regulated parties retaining control of the documentation, we can control what other entities are able to review our corporate information.

Response: The EPA notes that reporting is an essential element in compliance assurance, and this is especially true in this sector. Because of the large number of sites and the remoteness of sites, it is unlikely that the delegated agencies will be able to visit all sites.

See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24 for more information regarding this issue.

Commenter Name: Steven A. Buffone
Commenter Affiliation: CONSOL Energy Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6859
Comment Excerpt Number: 21

Comment: Recordkeeping and Reporting

- EPA is soliciting comment on whether these records should also be sent directly to the permitting agency electronically to facilitate review remotely.
    - CONSOL does not believe it is necessary to send all of the permitting records or records relating to the initial notification and annual reports to the agency electronically to facilitate review remotely. These data are collected and retained by the operator and can be requested for review by the permitting agency when required. Since it is in the interest of the operator to properly document permitting, perform monitoring and perform and document needed repairs, the requirement to submit every related record would only create a backlog of correspondence for both the regulatory agency and industry unnecessary for record keeping and reporting purposes.

Response: See response to DCN EPA-HQ-OAR-2010-0505-7058, Excerpt 79.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 61

Comment: EPA's proposed requirements related to the substantive content of annual reports are excessive, overly-burdensome, and not required under other NSPS programs. As a threshold matter, EPA should not require all records be submitted directly to the permitting agency, but instead, records should be available at the affected facility or local field office for review. Under both NSPS OOOO and KKK, operators collect data throughout the year and summarize the same in semiannual reports, while keeping the detailed supporting documentation on the facility site. This approach has been particularly successful, and reduces unnecessary reporting burdens and recordkeeping requirements. The existing reporting requirements are sufficient and EPA has not offered any reason to deviate from these programs.

Response: See responses to DCN EPA-HQ-OAR-2010-0505-6241, Excerpt 36 and DCN EPA-HQ-OAR-2010-0505-7058, Excerpt 79.

Commenter Name: Richard S. Anderson, Director of Air Quality Compliance
Commenter Affiliation: Plains All American Pipeline, LP

Document Control Number: EPA-HQ-OAR-2010-0505-6996
Comment Excerpt Number: 4

Comment: Electronic Reporting and State Delegation.

Section 60.5420a would require the submittal of an annual report via the EPA's Electronic Reporting Tool (ERT). Does this mean that the EPA will not be delegating enforcement authority for this proposed regulation to state or local agencies? Typically, if a state or local agency has been delegated authority of a regulation, all reporting will be submitted to the associated state. If reports need to be submitted to the state in one format and also to EPA in a different electronic format, it will create confusion and place an unnecessary burden on the regulated entities. Please indicate how the EPA will address this issue.

Response: The EPA notes that annual reports are submitted to the Central Data Exchange (CDX) via the Compliance and Emissions Data Reporting Interface (CEDRI). The ERT is an access-based tool that is used to create electronic copies of stack test reports. Use of electronic reporting in this rule and other subparts does not mean that the EPA is not delegating the rule to state and local air agencies.

See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24, for more information regarding this issue.

Commenter Name: Richard A. Hyde, P.E., Executive Director
Commenter Affiliation: Texas Commission of Environmental Quality (TCEQ)
Document Control Number: EPA-HQ-OAR-2010-0505-6753
Comment Excerpt Number: 6

Comment: Electronic reporting and transparency. The TCEQ fully supports electronic reporting and transparency. The TCEQ recommends that electronic reporting should be required or at least listed as the primary method of reporting for the proposed rules. The use of electronic reporting would tend to reduce the administrative burden of the rules on regulatory agencies responsible for implementing the rules.

Response: The EPA thanks the commenter for their support.

See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24 for more information regarding this issue.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)

Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 27

Comment: Further, we recommend that those records retained for 5 years should also be sent directly to the permitting agency electronically to facilitate review remotely. Again, the availability of the electronic records must not be a substitute for onsite visits or follow-up. The regulator having the availability of the electronic records will be a good resource of information in the event of a serious malfunction or incident.

Response: The EPA is finalizing some electronic reporting requirements in this rule. See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24 for more information regarding this issue.

Commenter Name: Jill Linn, Environmental Manager
Commenter Affiliation: WBI Energy Transmission, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6939
Comment Excerpt Number: 16

Comment: WBI Energy is not opposed to requiring electronic reporting to agencies administering or having delegated authority to administer this rule. When done effectively, electronic reporting can save time when compared to preparing paper reports. If electronic reporting is required, WBI Energy recommends that EPA work with agencies that have delegated authority to administer the rule to determine how the information should be supplied. The requirement should not take away from a State's ability to administer their own environmental regulations in a way that best fits their individual circumstances.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 24.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 38

Comment: EPA has requested comment for ways to minimize the recordkeeping and reporting burdens (P129). We request that EPA not require the regulated entities to upload documentation to the regulating agency, and not require the regulated entities to maintain records on our corporate web sites. Permitting the regulated entities to maintain control over the required documentation achieves EPA's goal to minimize recordkeeping and reporting burdens and the regulated entities concerns about safety at their facilities.

To further reduce our recordkeeping and reporting burden, we request that all original, or paper copies, of reports and all electronic records be stored at a location that is best managed by the

owner/operator. Page 127/128 states, "These digital photographs and logs must be available at the affected facility or the field office". Page 129 and Page 393 state, "the records must be maintained either onsite or at the nearest field office".

Maintaining records at the nearest field office is neither beneficial to the regulating agency nor the owner/operator. Field office personnel are focused on the operations of the company, and not on maintaining documentation for regulation compliance. We have several field offices to support drilling programs in multiple different states. Storing documentation at the nearest field office will require owners/operators to hire several people or require one person to travel extensively to maintain required documentation.

We agree with the statement on Page 127/128 that documentation is available at the field office, but request that the documentation be maintained at the office location that best provides the owner/operator the most control over organizing and managing the data.

This includes managing data on servers that are accessible at remote locations. Owners and operators should have the ability to manage all of the data servers from one location and not be required to install separate data servers at each of the field offices to have the reports accessible at the local field office. This type of structure will measurably increase the difficulty of managing data and also our operating cost to develop, implement, and manage this type of system on a regular basis.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 43

Comment: In the Proposed NSPS OOOOa Rule, EPA specifically "solicit[s] comment on ways to minimize recordkeeping and reporting burden." To minimize the recordkeeping and reporting burdens, Kinder Morgan urges EPA to ensure NSPS OOOOa and Subpart W are not duplicative or unnecessarily additive, either from a monitoring perspective or from a reporting perspective. Specifically, Kinder Morgan requests that monitoring under NSPS OOOOa and Subpart W align such that an operator could conduct monitoring for both programs, at each facility, on the same scope and schedule set forth under Subpart W (e.g., annually) to make the most effective use of resources and equipment. Through this approach, an operator would only be required to submit one report under Subpart W to satisfy reporting requirements under both Subpart W and the Proposed NSPS OOOOa Rule. Importantly, EPA never intended Subpart W to duplicate other programs; rather the GHG Reporting Program is intended to "supplement[ ] and complement[ ] . . . existing U.S. government programs." Even in its proposed rule for the GHG Reporting Program in 2009, EPA stated its commitment to "working with State and regional programs to coordinate implementation of reporting programs, reduce burden on reporters, provide timely

access to verified emissions data, establish mechanisms to efficiently share data, and harmonize data systems to the extent possible."

Since promulgation of Subpart W in 2009, operators such as Kinder Morgan have expended significant resources to develop comprehensive data collection systems and programs, as well as to properly train personnel to accurately collect and report data consistent with the Subpart W requirements. Under the Subpart W monitoring and reporting requirements, Kinder Morgan has had great success in monitoring and reporting GHG data in a manner both informative to EPA and informative to development of effective corporate-wide voluntary efforts that will achieve emission reductions through responsible, transparent, and verifiable actions that in effect "obviate the need to meet obligations associated with NSPS applicability." The existing Subpart W program, and the extensive familiarity with the programs in place to implement Subpart W should not be ignored in considering requirements under NSPS OOOOa and in particular, the associated monitoring and reporting requirements. Continued compliance with the same survey schedule and frequency as the existing Subpart W program already in place would "avoid creating disruption for operators following advanced responsible corporate practices," which EPA states as one of its goals of the Proposed NSPS OOOOa Rule. For these reasons, EPA should align the survey requirements proposed under Proposed NSPS OOOOa Rule with those under Subpart W in order to provide appropriate regulatory streamlining. In addition, annual reporting required for Subpart W and NSPS OOOOa (upon adoption) should be able to be accomplished through one annual report in order to diminish the level and extent of unnecessary and duplicative paperwork.

Finally, Kinder Morgan requests that EPA take the time to streamline the various programs and reporting requirements. With the promulgation of NSPS OOOOa, Kinder Morgan facilities would be subject to multiple reporting programs for any given facility, all with varying content, formatting requirements, and/or submission requirements. Kinder Morgan asks that EPA develop one single platform capable of accepting multiple NSPS and other program reports in order to streamline industry's reporting requirements as well as EPA's review of the same. Kinder Morgan believes the concept of eGGRT is the type of system EPA should build off of to develop a single platform for such reporting requirements, but requests EPA develop a new system through a separate and thorough public process specific to tracking multiple programs in one platform—focusing on efficiency and separation of data as necessary for the appropriate program. Acquiring and becoming versed in the various data systems, tracking pursuant to different mechanisms and calendars, and inputting different data points into a different location under each program is cumbersome and overly burdensome. The ultimate goal should be to reduce the reporting requirements, which became increasingly burdensome and create confusion. Kinder Morgan reserves the right to comment on any proposed reporting platform for the various programs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Tom Michels
Commenter Affiliation: ONE Future

Document Control Number: EPA-HQ-OAR-2010-0505-6880
Comment Excerpt Number: 11

Comment: Recommendation 4: Permit One Future Recordkeeping and Reporting as an Alternative to the Recordkeeping and Reporting Requirements in the Proposed Rule.

The Proposed Rule includes extensive recordkeeping and reporting requirements. EPA has extensive discretion to determine what recordkeeping and reporting requirements are necessary for implementation and enforcement of this type of rule. ONE Future urges EPA to authorize that ONE Future member companies that achieve specified interim targets for their methane emission intensity should have relief many of the paperwork burdens associated with demonstrating their compliance with both the OOOOa standards as well as any future Existing Source Performance Standard for the oil and gas sector.

EPA's own cost/labor estimates associated with the proposed NSPS requirements for industry record keeping and reporting (activities such as writing and submitting the notifications and reports, developing systems for the purpose of processing and maintaining information, and training personnel to be able to respond to the collection of information) indicate an estimated average annual burden of 92,658 labor hours with an annual average cost of $3,163,699. Although some of the data and records are basic, many provisions are purely related to demonstrating compliance. (For example, EPA requires digital photographs of operators physically performing monitoring surveys with embedded latitude and longitude positions). Stated differently, these reporting provisions exist to prove you committed no crime. We believe that this burden should be waived or mitigated for proactive operators who have good track records for compliance and safe operations and who by enrollment in ONE Future have demonstrated their interest in continuous improvement.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Richard A. Hyde, P.E., Executive Director
Commenter Affiliation: Texas Commission of Environmental Quality (TCEQ)
Document Control Number: EPA-HQ-OAR-2010-0505-6753
Comment Excerpt Number: 17

Comment: Consolidation of Oil and Gas Regulations. Considering the complex oil and gas regulations adopted over the past decade, and the proposed amendments, the TCEQ recommends that the EPA establish a workgroup with EPA, environmental, and industry representatives to simplify, reduce, and consolidate all the reports and submittals needed to comply with federal regulations for most regulated oil and gas sites. This should encompass revisions and voiding some duplicate federal regulations as needed for all the equipment commonly found at oil and gas sites. The EPA should also publish implementation documents and support materials which are straightforward and simple, to help this industry understand and successfully comply with the applicable requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Lindel Fowler, Acting Executive Director
Commenter Affiliation: Railroad Commission of Texas
Document Control Number: EPA-HQ-OAR-2010-0505-6917
Comment Excerpt Number: 7

Comment: Finally, the Commission joins TCEQ in recommending that EPA establish a workgroup with state regulatory, environmental, and industry representatives to simplify reports and submittals needed to comply with federal oil and gas air regulations, including elimination of duplicate requirements and publication of straightforward implementation and support materials to help industry achieve compliance.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: C. William Giraud
Commenter Affiliation: Concho Resources Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6847
Comment Excerpt Number: 13

Comment: Within this proposed rule, the EPA has set forth a plethora of record and reporting requirements that do not have any impact on reducing emissions. Instead, the burdensome paperwork requirements will add to the already officious permitting process. Concho encourages the EPA to re-examine the recording and reporting requirements within the Proposed Methane Standards and streamline them with Subpart W where possible and eliminate recordkeeping requirements that do not reduce emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Stuart Spencer, Associate Director, Office of Air Quality
Commenter Affiliation: Arkansas Department of Environmental Quality (ADEQ)
Document Control Number: EPA-HQ-OAR-2010-0505-6924
Comment Excerpt Number: 4

Comment: EPA requested comment on "ways to minimize recordkeeping and reporting burden." As discussed above, EPA should evaluate existing state requirements and liberally deem them sufficient for purposes of Subpart OOOOa and establish a mechanism for states to implement their own programs that supersede and satisfy Subpart OOOOa.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: James Martin
Commenter Affiliation: Noble Energy
Document Control Number: EPA-HQ-OAR-2010-0505-6852
Comment Excerpt Number: 12

Comment: Noble has a number of concerns about the complexity and scope of the monitoring, recordkeeping, and reporting requirements proposed by EPA, particularly with regard to the fugitive emissions program. Noble reiterates its belief that EPA would be well advised to model its program on the program adopted by Colorado, which provides a streamlined system for monitoring, recordkeeping, and reporting. Noble asserts that a program less onerous than that proposed by EPA would provide significant environmental benefits with materially lower costs, and would better reflect the principles of EPA's e-enterprise efforts.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Morgan Lambert, Deputy Air Pollution Control Officer
Commenter Affiliation: San Joaquin Valley Air Pollution Control District in California
Document Control Number: EPA-HQ-OAR-2010-0505-6974
Comment Excerpt Number: 5

Comment: The proposed NSPS would add redundant record keeping, and unnecessary plan submission. Because District rules already require extensive records of leak detection and repair work, and the submission of Operator Management Plans that detail fugitive counts and control, the proposed NSPS's recordkeeping and plan submission requirements are redundant and would not result in lower emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 9

Comment: NSPS OOOOa should not be duplicative of or additive to 40 C.F.R. Part 98 ("Subpart W") monitoring and reporting requirements. EPA should tailor any NSPS OOOOa emissions monitoring such that an operator could conduct monitoring for both programs, at each facility, on the same scope and schedule set forth under Subpart W (e.g., annually) to make the most effective use of resources and equipment.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Theresa Pugh
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6872
Comment Excerpt Number: 33

Comment: Recordkeeping requirements should not be transformed into new reporting requirements, and leak survey requirements should not be expanded to include additional digital records.

EPA requests feedback on recordkeeping issues. For example, EPA proposes utilizing technology to facilitate sharing records directly with regulatory agencies. EPA also requests comment on expanding the use of technology such as digital pictures for leak surveys. INGAA does not support expanding reporting and recordkeeping. The Proposed Rule's reporting and recordkeeping requirements require the use of digital surveys showing latitude and longitude. OGI cameras typically do not have the functional capability to record latitude and longitude. This is not consistent with other LDAR programs and should be removed. If EPA considers adding requirements, stakeholders should be provided the opportunity to comment on the specific requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Theresa Pugh
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6872
Comment Excerpt Number: 37

Comment: The Proposed Rule includes separate requirements for recordkeeping and reporting, which is the standard format for NSPS and NESHAP regulations. INGAA does not support new methods for sharing records directly with agencies, as this blurs the line between recordkeeping and reporting obligations. Each has its place and context in regulations, and information that is directly shared with agencies should be clearly proposed and justified as a reporting requirement, so that stakeholders have an opportunity to comment.

EPA also requests comments on the viability and benefits of reporting and recordkeeping approaches that utilize technology such as digital pictures, and areas where such use might be expanded. The Proposed Rule includes defined recordkeeping and reporting requirements. It is likely that EPA will receive recommendations from other parties requesting such documentation and reporting (including to cover digital pictures associated with leak surveys). If EPA intends to amend recordkeeping and reporting requirements that differ from the Proposed Rule, EPA should provide another opportunity for comment on those new requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 33

Comment: Staggered annual reporting for compressors is overly burdensome on operators

MarkWest proposes the rule set an annual reporting date for all applicable sources subject to Subparts OOOO and OOOOa *(e.g.,* September 30th every year, or within 90 days of the end of the year, etc.). Based on our members' past experience complying with NSPS OOOO, annual reporting is very burdensome; especially so for operators with many compressors, each with varying initial startup dates, requiring individual tracking and reporting under the proposed rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: C. Wyman
Commenter Affiliation: American Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-6874
Comment Excerpt Number: 17

Comment: AGA Urges EPA To Consider Revisions That Promote Consistency With Other EPA Programs.

AGA appreciates EPA's attempt to minimize the burden on regulated parties by seeking comment on how the Agency can avoid duplication or conflicts with other existing regulations. Several examples are discussed in these comments (e.g., delay of repair provisions), and reiterated below.

- The proposed rule requires semi-annual fugitive emission leak detection surveys at compressor stations. Instead, for consistency with EPA's Subpart W, the leak detection surveys should be required on an annual basis.
- Fugitive emission leak surveys should allow the use of Method 21 for consistency with EPA's Subpart W, LDAR requirements in other NSPS and NESHAPs (e.g., 40 C.F.R. Part 60 Subparts VV, VVa), as well as numerous state and local agency programs.
- For Method 21 leak surveys, the leak definition should be 10,000 ppm for consistency with LDAR requirements in other existing regulations, including EPA's GHGRP.
- Delay of repair provisions should be incorporated in EPA's LDAR program for fugitive emissions from compressor stations.
- EPA should consider alternative compliance options identified through the Natural Gas STAR program, including DI&M for addressing compressor station equipment leaks and condition-based maintenance for reciprocating compressor rod packing.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 57

Comment: EPA has also requested comment on the viability of using "check in" applications with geospatial accuracy for compliance. We agree with EPA that this is a method to reduce documentation requirements and improve the information exchange between the owners/operators and EPA. This approach will be beneficial during the data collection process and during audits to ensure that owners/operators are in compliance with the regulation.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 56

Comment: Potential to Promote Advances in Data Capture (e.g., ''Check-In App'' With Location and Photos)

We recommend this approach be adopted and additionally providing the REC PIX for online public viewing.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 67

Comment: EPA requests comment requiring operators, "to report quantitative environmental results on their corporate maintained Web sites . . . keeping in mind that monitoring and reporting requirements that may be sufficient for government regulators may be insufficient for the public." EPA indicates these "environmental results" might include monitoring data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in a rule, and third-

party certifications. Kinder Morgan adamantly objects to this proposal. This proposal is wholly inappropriate and raises a host of concerns.

First, regulatory reporting and "environmental results" are nuanced, complex, and not commonly understood. Requiring companies to publish this information would not improve transparency, but instead, would cause the company to be constantly subject to inquiries and demands due to misinterpretation of the published information.

Second, EPA should not insert itself into a company's corporate policy and website by requiring direct publication of regulatory information to the public. A company reports information to EPA (or another federal agency) under a regulatory program to demonstrate compliance with that regulatory program. The public, through the Freedom of Information Act or direct publication by the agency on the agency's website, then has access to this information upon request. Requiring private companies to publish qualitative or quantitative environmental information is unnecessary and inappropriately seeks to delegate EPA's own duties to communicate with and deal with public requests to the regulated entity.

Third, it may be unconstitutional for EPA to compel commercial speech. Compelled commercial speech is subject to an intermediate-level of scrutiny, and unless EPA can affirmatively prove that (1) its asserted interest is substantial, (2) the speech regulation directly and materially advances that interest, and (3) the regulation is narrowly tailored to that interest, the compelled commercial speech will likely not be upheld in court. Here, EPA is not seeking to compel "purely factual and uncontroversial" disclosures; rather, the disclosures required by EPA under this Proposed NSPS OOOOa Rule, as discussed above, would be subject to interpretation, leading to potential controversies. Where this disclosure of information does not directly relate to emissions or other environmental benefits, EPA should not take lightly the consideration that it cannot, in most instances, compel commercial speech.

Finally, EPA offers no rationale for its proposal to self-report on individual company websites, stating only that online publication "could" improve transparency and offers no basis supporting the need for this proposal in the protection of public health, safety, welfare, or the environment.

For these reasons, EPA should eliminate this proposal.

Response: The EPA appreciates the commenters' insight on the proposed requirement for owners and operators to post compliance information on a web site. In order to more thoroughly explore some of the issues raised, we are not finalizing these requirements at this time.

Commenter Name: David McBride
Commenter Affiliation: Anadarko Petroleum Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6806
Comment Excerpt Number: 17

Comment: EPA has the authority to publish environmental results and other regulatory violations and enforcement actions on its website, and we believe this responsibility for public disclosure is appropriately placed with the regulator.

Section 114 of the CAA establishes the scope of EPA's recordkeeping and reporting authority (42 U.S.C. 7414(a)). Specifically, section 114 provides the authority for EPA to require records be retained, and reports provided to the EPA. These recordkeeping and reporting requirement serve to aid EPA in" determining whether any person is in violation of" an implementation plan, standard of performance or emissions standard. Id. The authority of EPA to promulgate recordkeeping and reporting requirements for purposes of determining compliance by government regulators does not extend to mandating public disclosure.

Section 114 does not provide EPA with the authority to mandate corporations publically disclose such information on corporate websites. Therefore, in response to an EPA inquiry as to whether the agency should promulgate a regulatory requirement for reporting "quantitative environmental results" on corporate websites, the answer is simply "no." EPA lacks the authority to impose such a requirement of corporate information on corporate websites under section 114 of the CAA.

Additionally, a public disclosure requirement would violate the legal rights of corporations to protect their proprietary, confidential and trade secret business information and commercial data. EPA is in fact legally bound to protect the confidentially of such information, and in turn cannot force, by regulation, the release of such data by the entity seeking its protection. See e.g. Trade Secrets Act, 18 U.S.C. 1905 (making it criminal for an officer or employee of the United States to disclosure of proprietary information to the public other than as authorized by law), Freedom of Information Act Exemptions, 42 U.S.C. 552 (limiting what information can be disclosed to the public by government agencies).

Finally, EPA has not established a demonstrably rational for imposing such public disclosure requirement as required by the APA. The APA requires that a rulemaking be demonstrably rational including record of a reasoned decision-making and supported by data. Greater Boston Television Corp. v. FCC, 444 F.2d 841 851 (D.C. Cir. 1970). In whole, for the reason identified above, EPA should not pursue "reporting quantitative environmental results" via corporate websites.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 39

Comment: Further, under no circumstances should EPA require companies to report quantitative environmental results on their own corporate websites. See 80 Fed. Reg. at 56,652. EPA has not

pointed to any provision of the CAA under which it could require each regulated entity to maintain such a website and serve as a public clearinghouse for compliance data at its own expense. While EPA may possess such authority in the enforcement context to include corporate reporting in a consent decree, it cannot do so in a generally applicable regulation. Instead, to the extent that EPA believes information should be made available to the public, EPA must bear the burden of maintaining that information on its own website. The reporting requirements for affected facilities must be limited to submitting necessary data to EPA.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 55

Comment: Electronic Reporting – EPA should not require the reporting of data related to rule compliance in multiple locations since this adds cost with no benefit and violates the First Amendment.

In the preamble, EPA solicited comments on potentially requiring owners and operators of affected facilities to report quantitative environmental results on their corporate maintained web sites (FR 56652):

"The EPA requests comment on whether all owner and operators should be required to do this, or only a subset (e.g., based on size of entity, complexity or number of operations, web presence, etc.) and what data we should require them to report; keeping in mind that monitoring and reporting requirements that may be sufficient for government regulators may be insufficient for the public. Government regulators may be satisfied with a regulation that requires a facility to monitor specified parameters (e.g., operating temperature) to generally assure that the facility is operating properly, and to perform a formal compliance test (e.g., measuring actual smokestack emissions)."

It is inappropriate for EPA to require the reporting of environmental performance on corporate maintained websites; it far exceeds any CAA authority to require records and violates the first amendment. Any requirement to alter the company's website would be a content base restriction subject to strict scrutiny. See, *Reed v. Town of Gilbert,* 135 S. Ct. 2218 (2015). And without conceding that this is commercial speech, this would not even meet the test for appropriate regulation of commercial speech. In *Central Hudson Gas & Elec. Corp v. Public Service Comm'n ,* 447 U.S 557(1980), any regulation of commercial speech will be judged by whether it " directly advances the governmental interest asserted, and whether it is not more extensive than is necessary to serve that interest." *Id.* at 566. Should EPA adopt this requirement it would fail both. This data is already being reported to the agency as required under the existing rule, and to one degree or another already provided to the public. To require reporting of the same or similar

data via company websites is both unnecessary does further advance the government interest, and is unequivocally more burdensome. EPA should not pursue this requirement.

Costs for building and maintaining such a website could easily each $15,000 or more annually per company, depending on the number of reports and site configuration.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 59

Comment: We also have concerns over the next generation recordkeeping and reporting requirements proposed in this rule; these proposals would exceed EPA's authority, pose a potential public safety risk, and add significant reporting costs without providing any additional environmental benefit. In particular, EPA does not have the authority to require companies to place certain information on their corporate websites, including information that is not otherwise required by law but may be desired by certain members of the public.

While some Alliance members may support some elements of EPA's next generation compliance program, that program does not grant EPA unfettered authority to promulgate regulations that could force the entire industry to change the way in which it designs and operates its facilities or reports information—particularly where the rule has neither demonstrated the need to do so, nor discussed the environmental benefits to be obtained or the costs to be incurred. The next generation program must be reasonable with respect to its requirements and its consequences.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 41

Comment: We also have concerns over the next generation recordkeeping and reporting requirements proposed in this rule; these proposals would exceed EPA's authority, pose a potential public safety risk, and add significant reporting costs without providing any additional environmental benefit. In particular, EPA does not have the authority to require companies to place certain information on their corporate websites, including information that is not otherwise required by law but may be desired by certain members of the public.

While some operators may support some elements of EPA's next generation compliance program, that program does not grant EPA unfettered authority to promulgate regulations that could force the entire industry to change the way in which it designs and operates its facilities or reports information-particularly where the rule has neither demonstrated the need to do so, nor discussed the environmental benefits to be obtained or the costs to be incurred. The next generation program must be reasonable with respect to its requirements and its consequences. On balance, we do not believe requiring third party certification of design is reasonable.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Richard S. Anderson, Director of Air Quality Compliance
Commenter Affiliation: Plains All American Pipeline, LP
Document Control Number: EPA-HQ-OAR-2010-0505-6996
Comment Excerpt Number: 6

Comment: Posting of Information on Company Web Site.

On page 56652, EPA requested comment on whether affected entities should be required to post certain information such as "monitoring data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in the rule, and third-party certifications" on company Web sites. Under numerous other programs and regulations, this kind of information is already submitted to state agencies and can be reviewed by the public in agency files. We see no compelling reason why the information gathered under this rule alone should be treated differently.

Further, such a requirement would presume that a regulated entity even had a public Web site to start with. We are not aware of any legal requirement for any company, public or private, to create and maintain a public Web site. However, the imposition of a requirement to post information developed in compliance with this rule on a public Web site would indirectly create a requirement that a company establish and maintain a public Web site. Plains is unaware of any authority granted under the Clean Air Act that allows EPA to require companies to establish and maintain public Web sites.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 80

Comment: TXOGA opposes EPA's suggestion that companies should be required to report "quantitative environmental results on their corporate web sites. This is a highly burdensome requirement that goes beyond EPA's statutory authority. Specifically, EPA:

> solicits comment on requiring owners and operators of affected facilities to report quantitative environmental results on their corporate maintained web sites. Such results might include monitoring data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in a rule, and third-party certifications. The EPA requests comment on whether all owner and operators should be required to do this, or only a subset (e.g., based on size of entity, complexity or number of operations, web presence, etc.) and what data we should require them to report; keeping in mind that monitoring and reporting requirements that may be sufficient for government regulators may be insufficient for the public. Government regulators may be satisfied with a regulation that requires a facility to monitor specified parameters (e.g., operating temperature) to generally assure that the facility is operating properly, and to perform a formal compliance test (e.g., measuring actual smokestack emissions) only upon the government's request.

EPA has provided no rationale to support what would plainly be a high burden on companies. Moreover, EPA has provided no statutory support or other citation that would give it authority to impose such a requirement. Requiring companies to include compliance information on their web sites does not fall within the definition of a "standard of performance" within the meaning of Section 111 of the Act. Furthermore, CAA Section 114 gives the Administrator authority to require submittal of information to EPA but does not authorize EPA to require generation of web sites and dissemination of information to the public. If such authority had been contemplated, Congress would have included it in the statute.

In addition, any requirement that environmental performance be reported on corporate web sites raises First Amendment concerns. Any required form of speech through a company's web site would be a content base restriction subject to strict scrutiny. Although TXOGA does not concede that environmental performance reporting via corporate web sites would constitute commercial speech, any regulation of commercial speech will be judged by whether it "directly advances the governmental interest asserted, and whether it is not more extensive than is necessary to serve that interest." This requirement would not survive strict scrutiny or pass the test for commercial speech. This data is already provided to the Agency as required under the regulations and is generally available to the public. Requiring companies to include compliance information on their web sites is unnecessarily duplicative, does not advance the government's interest, and is overly burdensome. TXOGA therefore urges EPA not to move forward with this requirement.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Theresa Pugh
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6872
Comment Excerpt Number: 26

Comment: Reporting on Company Websites Should Not Be Required.

EPA requests comment requiring operators "to report quantitative environmental results on their corporate maintained Web sites." [emphasis added] The preamble also ponders the type of information and data that could be included in such reports. INGAA objects to this proposition.

The details and nuances of regulatory compliance are not commonly understood. EPA notes that on-line reporting could improve transparency, but that claim is not supported by analysis or fact. EPA should not underestimate the complexities of interpreting "quantitative environmental results." Web site reporting is more likely to raise questions due to misinterpretation than to improve public transparency and insight.

Significant additional effort would be required to develop standardized information for reporting and clearly define the meaning for the reported information. The nuances of Subpart OOOOa would not be understood by the vast majority of third parties that may review the website reports. For example, pneumatic controller counts, justification for applying a high-bleed pneumatic controller and time frames for rod packing replacement are all examples of compliance information for Subpart OOOOa affected facilities. Compliance requirements include work practices, equipment standards and control requirements depending upon the affected source. The terminology and regulatory criteria are beyond the comprehension of most individuals that are not well acclimated to the rule and would befuddle many online readers rather than improve transparency. Interpretation of reported quantitative results would likely cause confusion (and possibly unneeded consternation) because the reader would not understand the context of a complex regulation. Reporting on company websites is an ill-conceived idea and should not be required.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: C. Wyman
Commenter Affiliation: American Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-6874
Comment Excerpt Number: 19

Comment: The Reporting Of "Quantitative Environmental Information" On Corporate Websites Would Provide Little To No Benefit In Improving Public Transparency.

In the proposed rule, EPA is seeking comment on whether owners and operators of affected facilities should be required to report "quantitative environmental results" on corporate websites to promote public transparency, reduce emissions, and improve compliance. Although AGA

supports each of these goals, AGA does not believe that corporate website reporting will significantly advance these goals and instead may harm the public-private relationship.

As EPA itself recognizes, the details and nuances of regulatory compliance are not commonly understood by the public and "monitoring and reporting requirements that may be sufficient for government regulators may be insufficient for the public." As such, the reporting of any "quantitative environmental information" in a format meant for the regulator raises a significant risk for misinterpretation by the public, rather than any improvement in transparency or public insight.

Instead, any requirement for website reporting that would prove meaningful to the public would require significant additional effort by EPA and the regulated community to develop standardized information to be reported and to clearly define the required data fields and definitions for the data elements. Background details would be needed because the nuances, terminology, and regulatory criteria of Subpart OOOOa would not be understood by the vast majority of third parties that may review the website reports. Interpretations could cause confusion due to the reader's lack of understanding of the context of a complex regulation. Such undertaking would expend valuable and limited Agency and operator resources in exchange for what is likely to be a minimal benefit. The public already has access to robust emissions data on EPA's Subpart W website. For these reasons, AGA strongly suggests that EPA not require the reporting of quantitative environmental results on corporate websites.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Pamela Lacey, Chief Regulatory Counsel
Commenter Affiliation: American Gas Association (AGA)
Document Control Number: EPA-HQ-OAR-2010-0505-6936
Comment Excerpt Number: 16

Comment: The Reporting of "Quantitative Environmental Information" On Corporate Websites Would Provide Little to No Benefit in Improving Public Transparency

In the proposed rule, EPA is seeking comment on whether owners and operators of affected facilities should be required to report "quantitative environmental results" on corporate websites to promote public transparency, reduce emissions, and improve compliance. Although AGA supports each of these goals, AGA does not believe that corporate website reporting will significantly advance these goals and instead may harm the public-private relationship.

As EPA itself recognizes, the details and nuances of regulatory compliance are not commonly understood by the public and "monitoring and reporting requirements that may be sufficient for government regulators may be insufficient for the public." As such, the reporting of any "quantitative environmental information" in a format meant for the regulator raises a significant risk for misinterpretation by the public, rather than any improvement in transparency or public insight.

Instead, any requirement for website reporting that would prove meaningful to the public would require significant additional effort by EPA and the regulated community to develop standardized information to be reported and to clearly define the required data fields and definitions for the data elements. Background details would be needed because the nuances, terminology, and regulatory criteria of Subpart OOOOa would not be understood by the vast majority of third parties that may review the website reports. Interpretations could cause confusion due to the reader's lack of understanding of the context of a complex regulation. Such undertaking would expend valuable and limited Agency and operator resources in exchange for what is likely to be a minimal benefit. The public already has access to robust emissions data on EPA's Subpart W website. For these reasons, AGA strongly suggests that EPA not require the reporting of quantitative environmental results on corporate websites.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Jill Linn, Environmental Manager
Commenter Affiliation: WBI Energy Transmission, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6939
Comment Excerpt Number: 17

Comment: WBI Energy supports efforts by companies to provide information to the public regarding quantitative environmental results and has methods in place for providing this type of information to the public. However, data collected for rule compliance is submitted for review by the administering agency familiar with the facilities and rule requirements. WBI Energy is concerned that information intended to be provided to the administering agency for compliance could potentially be misinterpreted by members of the general public that don't have detailed knowledge of the regulated facilities or the requirements in the regulation. Therefore, WBI Energy strongly recommends not requiring the reporting of this information on corporate web sites.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 36

Comment: For the same reason, we are opposed to any requirement that affected facilities report quantitative environmental results on their corporate web sites, including audit documents, monitoring data, quantification of excess emissions and corrective actions, results of performance tests, affected facility status, and third-party certifications. It is inappropriate for EPA to require the reporting of environmental performance on corporate maintained websites, and would undermine the company's ability to deal with these issues internally.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 37

Comment: Finally, to the extent that the public is concerned about finding out whether there are "bad actors" out of compliance with environmental laws, there is already a mechanism that makes that information publicly available. Information is usually publicly released when a company's environmental non-compliances result in fines or penalties. This information is already readily available to investors, key stakeholders, and the general public through disclosures from the EPA's databases, in SEC filings, media outlets, and from the companies themselves. As a result, this new requirement would do little more than force companies that have not engaged in the sort of behavior that would warrant a penalty to constantly disclose their audit reports.

While these third-party verification and related Next Generation proposals are largely based on the premise that regulated sources will cheat if they can get away with it, there is no basis for this concern. Indeed, many EPA programs have traditionally been based on the premise that companies will honestly report, and sworn certifications will be accurate, such as the Responsible Officer ("RO") certified reports and Title V air permit certifications.

If EPA does wish to make information publicly available, then Enterprise believes that EPA should be the one to provide the data to the public. EPA is in a better position to provide this information than the operators for several reasons. EPA already has numerous websites established that make information public that has been submitted to the agency pursuit to a requirement. As a result, EPA has the staff and tools to efficiently publish this information and to assure that the public can find it in one centralize location. By contrast, individual companies may not be similarly equipped, and members of the public seeking this information would have to search in numerous different places to find the information they are interested in. At a certain point, the difficulty in finding this information would make its disclosure almost meaningless. Second, EPA, as recipient of all of the relevant data, would be in the best position to determine what information should be released, and in what format, to ensure uniformity. This would make it easier for the public to read and compare the information. Finally, forcing companies to provide this information to the public in the first instance would create yet another administrative burden on these companies with no meaningful environmental benefit. Given that operators already report much of this data to EPA as required under existing regulations, requiring companies to report the same or similar data on their company websites is both unnecessary and adds burden with no value.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 68

Comment: If EPA does not allow operators to use alternative methods to detect and repair leaks, the PBPA requests that EPA remove the requirement that operators keep, and make publically available, the images resulting from these surveys. This requirement places unnecessary recordkeeping burdens on operators and has no legitimate compliance purpose. Instead, these images—which EPA proposes to make publicly available—would have a prejudicial impact on the public's perception of oil and gas operations and would unfairly open up operators to litigation challenges. The methane gases are detected and made visual by these OGI cameras at levels that are not harmful to humans. However, the images of escaping fugitive gases from the videos look like frightening clouds of pollutants and create an unjustified fear of danger to human health and the environment in the public's imagination. Preserving and releasing these images will do little but create unnecessary worries and misperceptions about oil and gas operations. EPA's proposal would only assist groups interested in engaging in fear mongering to use these images to whip up opposition to oil and gas operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Kevin J. Moody, General Counsel
Commenter Affiliation: Pennsylvania Independent Oil & Gas Association (PIOGA)
Document Control Number: EPA-HQ-OAR-2010-0505-6943
Comment Excerpt Number: 16

Comment: The U.S. EPA is soliciting comment on requiring owners and operators of affected facilities to report quantitative environmental results on their corporate maintained web sites. PIOGA strongly objects to such reporting. Emissions related information for affected facilities is readily available to the public from several sources making this potential requirement unnecessary. Also, many of PIOGA's small entity members do not have corporate websites on which to report environmental compliance related data.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 15

Comment: This additional requirement to make collected information easily available to the public and stakeholders as well as publish emissions data to our corporate web site on a regular

basis will require additional man hours from our employees. These man hours will be required to develop information management systems in a format that is suitable for publication for users to appropriately understand the information provided.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: C. William Giraud
Commenter Affiliation: Concho Resources Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6847
Comment Excerpt Number: 16

Comment: Concho opposes any effort by the EPA to require companies to report quantitative environmental results on their corporate maintained web sites. While Concho understands the need for reporting, this would result in duplication of information to the EPA and to our web site. It would be better to require reporting only to the EPA because then the agency would have control over it and be able to quality check what is being reported to the public. In addition to the annual reporting, mandating what is placed on a corporation's website would significantly increase reporting costs without any additional environmental benefit. Concho recommends that the EPA exclude this requirement from the final rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 37

Comment: We also believe that this information should not be made available to the general public to protect company assets from public access. Publishing survey information for our facilities provides the general public with coordinates to every wellhead and tank battery that is in the program, which could eventually be every producing asset. The general public having access to coordinates for our facilities increases the probability of injury from someone accessing our facility without the proper Personal Protective Equipment (PPE); or not knowing the safety standards.

We are concerned that the untrained public may attempt to access our locations, by obtaining coordinates published as a result of this regulation. Without the proper safety training and PPE, the general public is at a greater risk of exposure or injury while visiting our locations. The public may have an interest in accessing our locations to evaluate our emissions performance, curiosity to better understand our process, or to steal oil from the tanks.

Every year oil producers deal with the threat of oil being stolen from tank facilities. Some of the parties are sophisticated with their own equipment and trucks to haul oil away and others find low tech methods to steal the oil. This regulation may require owners and operators to provide coordinates to those who may be interested in stealing oil from our tanks.

After the September 11, 2001 attacks information related to energy infrastructure was removed from the internet because the government feared that these locations could become terrorist targets. We support the government's position that this information (coordinates to our assets and contents of our tanks) should not be available to reduce the risk of a terrorist attack at one of our facilities.

We understand EPA's intent to provide transparency in reporting, but believe that the safety risk outweighs the perceived benefit of transparency. We request that records not be available to the public, as is the case with most other regulations that already exist.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 9

Comment: Corporate Websites

NextEra Energy objects to EPA's proposal for companies to own and maintain public websites under this rule to share "quantitative environmental results." It is important to note that many facilities have multiple owners and/or operators that stretch across numerous companies. The gas infrastructure industry is unique in that many companies can have less than 5% ownership in an operation. The requirement to maintain publicly available information on corporate maintained websites will likely cause a compliance obligation between all affected parties resulting in information that would have limited public benefit. Small interest owners typically do not have access to environmental compliance records from operators at the sites. Should EPA determine this information is important for the public to access, we suggest that EPA include this information within existing programs including the GHGRP and TRI programs that already provide data to the public. Should EPA conclude that corporations themselves must maintain these websites, the final rule should place the burden of reporting on the majority operator.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Michael Hollis
Commenter Affiliation: Diamondback E&P LLC

Document Control Number: EPA-HQ-OAR-2010-0505-6869
Comment Excerpt Number: 26

Comment: If EPA does not allow operators to use alternative methods to detect and repair leaks, Diamondback requests that EPA remove the requirement that operators keep, and make publically available, the images resulting from these surveys. This requirement places unnecessary recordkeeping burdens on operators and has no legitimate compliance purpose. Instead, these images-which EPA proposes to make publicly available-would have a prejudicial impact on the public's perception of oil and gas operations and would unfairly open up operators to litigation challenges. The methane gases are detected and made visual by these OGI cameras at levels that are not harmful to humans. However, the images of escaping fugitive gases from the videos look like frightening clouds of pollutants and create an unjustified fear of danger to human health and the environment in the public's imagination. Preserving and releasing these images will do little but create unnecessary worries and misperceptions about oil and gas operations. EPA's proposal would only assist groups interested in engaging in fear mongering to use these images to whip up opposition to oil and gas operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Denzil R. West, Vice President
Commenter Affiliation: Reliance Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6915
Comment Excerpt Number: 25

Comment: If EPA does not allow operators to use alternative methods to detect and repair leaks, Reliance requests that EPA remove the requirement that operators keep, and make publically available, the images resulting from these surveys. This requirement places unnecessary recordkeeping burdens on operators and has no legitimate compliance purpose. Instead, these images-which EPA proposes to make publicly available-would have a prejudicial impact on the public's perception of oil and gas operations and would unfairly open up operators to litigation challenges. The methane gases are detected and made visual by these OGI cameras at levels that are not harmful to humans. However, the images of escaping fugitive gases from the videos look like frightening clouds of pollutants and create an unjustified fear of danger to human health and the environment in the public's imagination. Preserving and releasing these images will do little but create unnecessary worries and misperceptions about oil and gas operations. EPA's proposal would only assist groups interested in engaging in fear mongering to use these images to whip up opposition to oil and gas operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Brandon M. Black, Vice President
Commenter Affiliation: BC Operating, Inc.

Document Control Number: EPA-HQ-OAR-2010-0505-6968
Comment Excerpt Number: 22

Comment: BC requests that EPA remove the requirement that operators keep, and make publically available, the images resulting from these surveys. This requirement places unnecessary recordkeeping burdens on operators and has no legitimate compliance purpose. Instead, these images-which EPA proposes to make publicly available-would have a prejudicial impact on the public's perception of oil and gas operations and would unfairly open up operators to litigation challenges. The methane gases are detected and made visual by these OGI cameras at levels that are not harmful to humans. However, the images of escaping fugitive gases from the videos look like frightening clouds of pollutants and create an unjustified fear of danger to human health and the environment in the public's imagination. Preserving and releasing these images will do little but create unnecessary worries and misperceptions about oil and gas operations. EPA's proposal would only assist groups interested in engaging in fear mongering to use these images to whip up opposition to oil and gas operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Joe Strickling, Operations Manager
Commenter Affiliation: Patriot Resources, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6978
Comment Excerpt Number: 22

Comment: If EPA does not allow operators to use alternative methods to detect and repair leaks, Patriot Resources requests that EPA remove the requirement that operators keep, and make publically available, the images resulting from these surveys. This requirement places unnecessary recordkeeping burdens on operators and has no legitimate compliance purpose.

Instead, these images-which EPA proposes to make publicly available-would have a prejudicial impact on the public's perception of oil and gas operations and would unfairly open up operators to litigation challenges. The methane gases are detected and made visual by these OGI cameras at levels that are not harmful to humans. However, the images of escaping fugitive gases from the videos look like frightening clouds of pollutants and create an unjustified fear of danger to human health and the environment in the public's imagination. Preserving and releasing these images will do little but create unnecessary worries and misperceptions about oil and gas operations. EPA's proposal would only assist groups interested in engaging in fear mongering to use these images to whip up opposition to oil and gas operations.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Bill Thompson, Chairman
Commenter Affiliation: National Tribal Air Association (NTAA)

Document Control Number: EPA-HQ-OAR-2010-0505-6705
Comment Excerpt Number: 11

Comment: For the Proposed Rule, EPA asks whether two types of information regarding new and modified oil and natural gas facilities should be made publicly available. First, EPA asks whether, and to what extent, the public should have access to the compliance reports, portions or summaries of them, and or any other information or documentation produced pursuant to specified auditing provisions. Second, EPA asks whether owners and operators of affected facilities should be required to report quantitative environmental results on their corporate maintained websites. Such results might include monitoring data, quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in a rule, and third-party certifications.

The NTAA recommends that both types of information from new and modified oil and natural gas facilities be made publicly available to help keep these facilities accountable to Indian Tribes and others impacted by the VOC and methane emissions from such facilities.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 3

Comment: While the PA DEP has been continually upgrading their website during the years since the unconventional drilling boom began, still the Bureau of Air Quality's webpages have lagged behind. We recommend that the EPA establish guidelines (monitoring, record keeping, and reporting) along with improved public access, and funding in order to enable the availability of improved data. Ideally, we'd like to see permit applications, plan approvals, inspections, compliance information, and more information regarding monitoring (not all monitoring is available on line) readily available online for the public's review.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Emily E. Krafjack
Commenter Affiliation: Connection for Oil, Gas and Environment in the Northern Tier, Inc., (C.O.G.E.N.T)
Document Control Number: EPA-HQ-OAR-2010-0505-6787
Comment Excerpt Number: 55

Comment: We recommend mandating all owners and operators of affected facilities to report quantitative environmental results on their corporate maintained web sites. Information such as monitoring data (including fugitives), quantification of excess emissions and corrective actions, results of performance tests, affected facility status with respect to a standard contained in a rule, and third-party certifications are in part the information we are interested in having access. Additionally, information concerning complaints and emergency response actions are of interest. We recommend requiring all operators since sources change ownership sometimes annually which becomes confusing to not only the public but regulators as well. Therefore, there is an advantage to consistently applying this requirement to all owners, operators and sources. Information we'd be interested in seeing is emissions reported on emissions inventories, information concerning fugitive emissions, what is actually being emitted as compared to the issued permit, exact details regarding VOCs, not just a category, we prefer to see a listing of all pollutants under the VOC category, stack test dates and results, compliance and inspection information.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 67.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 42

Comment: Facilities in the onshore petroleum and natural gas production, gathering, processing, and natural gas transmission and storage industry segments that exceed the GHG Reporting Rule annual emissions reporting threshold of 25,000 CO_2 equivalent ("CO_2e") metric tons are subject to reporting under Subpart W (leaks, venting, blowdowns). Subpart W requires annual monitoring for those facilities subject to the Subpart W monitoring provisions.

In contrast, the Proposed NSPS OOOOa Rule would require an owner or operator to conduct fugitive emissions surveys semiannually with optical gas imaging technology at well sites and compressor stations. EPA also proposes "OGI monitoring surveys on an annual basis for new and modified well sites, and request[s] comment on OGI monitoring surveys on a quarterly basis for both well sites and compressor stations." Additionally, under the Proposed NSPS OOOOa Rule, "the required survey frequency would decrease from semiannually to annually for sites that find fugitive emissions from fewer than one percent of their fugitive emission components during a survey, while the frequency would increase from semiannually to quarterly for sites that find fugitive emissions from three percent or more of their fugitive emission components during a survey."

Furthermore, EPA has provided no justification for a more aggressive schedule, and in fact, data indicate that LDAR programs such as that proposed by EPA in NSPS OOOOa have diminishing returns with regard to emission reductions per event. EPA's Proposed NSPS OOOOa Rule would create unnecessary and significant duplicative monitoring and reporting requirements as compared to Subpart W, and Kinder Morgan requests that EPA eliminate this redundancy.

Response: The EPA is under no obligation in the development of subpart OOOOa to be bound by the requirements of subpart W for the frequency of fugitive emissions monitoring. The two rules have entirely different purposes and are authorized by entirely different sections of the CAA. Subpart OOOOa is authorized under section 111 of the CAA with the intent of reducing emissions of regulated pollutants from listed source categories. Subpart W is authorized under section 114 of the CAA for the purpose of gathering information.

We disagree with the commenter that the EPA did not provide justification for the monitoring frequency in the proposed rule. The TSD for the proposed rule (as well as the TSD for the final rule, both of which are available in the docket) provide the analyses that we used to determine BSER for fugitives emissions monitoring, which included monitoring frequency. As presented in the TSD and discussed in the preambles to both the proposed and final rules, we found these monitoring frequencies to be technically feasible and cost effective.

Commenter Name: Josh W. Luig
Commenter Affiliation: Veritas Energy, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6797
Comment Excerpt Number: 45

Comment: In addition, the monitoring and reporting requirements in the Methane NSPS are duplicative of the regulations found at Subpart W, which require gas production and processing sites and compressor stations at transmission and storage sites to annually monitor for fugitive emissions and to quantify those emissions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 42.

Commenter Name: Gary Buchler
Commenter Affiliation: Kinder Morgan, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6857
Comment Excerpt Number: 41

Comment: Kinder Morgan respectfully submits that EPA be mindful of and intentional about any final NSPS OOOOa rule as it relates to Subpart W. Specifically, and as discussed in more detail below, Kinder Morgan requests that EPA align monitoring under the Proposed NSPS OOOOa Rule and Subpart W such that an operator could conduct monitoring for both programs, at each facility, on the same scope and schedule set forth under Subpart W (i.e., annually) to make the most effective use of resources and equipment.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 42.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 12

Comment: We believe that EPA has underestimated the annual burden for recordkeeping and reporting requirements in NSPS subpart OOOOa. Information provided below shows that we are estimating our compliance cost to be significantly more than the estimates provided by EPA. Estimates provided are based on our current understanding of how the regulation will impact our industry.

Using the information provided above, EPA is estimating that the average owner or operator will spend approximately 36 hours per year (92,658 labor hours / 2,552 owners and operators), in the first three years, on compliance reporting activities. This time estimate is expected to cost the average owner $1,240 per year ($3,163,699 per year / 2,552 owners and operators).

We estimate a one-time cost to develop a management and reporting system to be $40,000 (750 man hours) and an ongoing cost of compliance of $60,000 per year (one full time person at 2,080 hours per year). These estimates are based on our current understanding of the rule, and only to meet the reporting requirements detailed in the regulation and identified below. These estimates do not include the cost to achieve compliance with our equipment at the affected facilities.

With information provided below from the proposed regulation, we estimate that the required time and cost to complete the reporting required by this regulation is significantly greater than the estimates that EPA provided in the regulation, and cited above. The new regulation will have a significant impact on our businesses by increasing our operating costs. This increase in operating costs will come from additional repairs at our facilities, emissions survey costs, reporting costs, and additional capital investment to meet emissions reductions.

The regulation clearly states that the owners and operators are required to develop and report this information to the agency, as the Clean Air Act authorizes (CAA). If this regulation is approved as written, owners and operators will be in violation of the Clean Air Act for not providing the required information. Page 366 states, "The information to be collected for the proposed NSPS is based on notification, performance tests, recordkeeping and reporting requirements which will be mandatory for all operators subject to the final standards. Recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414)."

The required information will be a substantial burden on our small organizations to collect, manage, store, and report to the Agency on an annual basis. As small oil production companies we continually search for ways to reduce operating cost and improve efficiency; especially since the price of crude oil has fallen by greater than 60% in the past twelve months. As small operators, we must focus on low cost operations to be competitive with larger companies. We do not have the benefit of large scale operations to spread our fixed cost like large operators. Regulations such as this one, with significant requirements and little to no economic benefit threaten the viability of small operators in the Illinois Basin.

As documented on several pages of the proposed regulation, the documentation will necessitate many more hours than EPA's estimated 36 hours per year. Companies are evaluating the need to hire another person solely to meet the reporting requirements of this new regulation. We believe that a full time position may be required to meet all of the initial reporting, annual reporting, and data management requirements to maintain compliance. We estimate that the fully loaded cost (salary and benefits) to fill this position will be an additional $60,000 per year to our current operations. As stated, the requirements are not trivial.

Some operators in our basin may drill 190 oil wells and perform work that would meet EPA's definition of a "modification" for more than 260 existing wells in a five year period. This is an average of 90 wells being drilled or modified each year, not including associated tanks or other Fugitive Emissions Components (as defined by EPA on Page 255). We expect this level of activity to continue into the future for most of the larger owners/operators in the Illinois Basin. We believe that smaller owners/operators will reduce their drilling and work over programs until the oil price increases again.

Using EPA's time per response of 3.9 hours (Page 368), this results in a reporting time of 350 man hours (3.9 hours x 90 affected facilities) to complete compliance reporting activities for the 90 affected facilities in a given year. This results in a compliance time that is nearly ten times the estimate (36 hours) calculated above. We believe that 350 man hours will be insufficient to meet the reporting requirements of this proposed regulation.

Reporting activities for the first year cover the wells drilled or modified for that year, but reporting for the second year will cover wells drilled or modified in the first year and all wells drilled or modified in the second year also. The reporting work will continue to grow each year as we continue to drill and modify wells. This growing work load leads us to believe that the reporting workload will require us to hire an additional employee.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: W. Michael Scott, General Counsel
Commenter Affiliation: Trilogy Operating, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6603
Comment Excerpt Number: 16

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." Trilogy estimates that the actual annual burden imposed by these Rules will be closer to 40-60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Bradley C. Cross, President/Partner
Commenter Affiliation: Big Star Oil & Gas, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6757
Comment Excerpt Number: 13

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." Big Star estimates that the actual annual burden imposed by these Rules will be closer to 40-60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Glenn Prescott
Commenter Affiliation: RK Petroleum Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6788
Comment Excerpt Number: 14

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." RK estimates that the actual annual burden imposed by these Rules will be closer to 40-60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: W. Michael Scott, Vice President and General Counsel
Commenter Affiliation: CrownQuest Operating, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6703
Comment Excerpt Number: 14

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." CrownQuest estimates that the actual annual burden imposed by these Rules will be closer to 40- 60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Rick D. Davis, Jr.
Commenter Affiliation: Midland Energy, Inc. and Petroplex Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6801
Comment Excerpt Number: 14

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." MEI estimates that the actual annual burden imposed by these Rules will be closer to 40-60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 13

Comment: According to EPA's analysis, "[t]he annual public reporting and recordkeeping burden for this collection of information is estimated to average 3.9 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years." The PBPA estimates that the actual annual burden imposed by these Rules will be closer to 40-60 hours per affected well site, which will result in an additional cost of $3,500-$5,000 in labor per well site per year. Given that there are hundreds of thousands, if not more than a million, well sites around the nation, these reporting and recordkeeping requirements will eventually balloon into tremendous industry-wide compliance costs.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

Commenter Name: Urban Obie O'Brien
Commenter Affiliation: Apache Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6808
Comment Excerpt Number: 19

Comment: Reporting:

Our comments on specific reporting requirements are:

a. Magnitude of Reporting Requirements: The recordkeeping and reporting burden of the proposed rules is huge and the true costs have been grossly underestimated by the agency. Figure 2 illustrates that the costs estimated by Apache for routine monitoring and additional reporting requirements over a five year time period are disproportionally high as compared to cost of other environmental regulatory requirements.

[Figure 2 shows the cost of the fugitive reduction program which includes routine monitoring and reporting, LDAR, and capital costs over a 5 year period]

Due to the cumulative effect of the proposed regulations and the expansion of "affected facility" count through interconnection with new sources, all of Apache's operations will be subject to Subpart OOOOa at some time in the near future. Apache currently has approximately 17,300 wells and 5,400 associated production facilities in operation in the U.S. and we anticipate that at least this many new facilities will eventually be subject to the recordkeeping and reporting requirements.

For illustration purposes we could assume 10,000 affected facilities are subject to Subpart OOOOa. That would require 20,000 LDAR reports (assuming two per year); 120,000 visible emissions observations for flares (one per month per flare); 120,000 closed vent system inspection reports (one per month); 120,000 cover inspection reports (one per month); 60,000 storage vessel affected facility reports (an average of 6 tanks per facility); 10,000 annual compliance demonstration reports; and 1,500 reciprocating compressor reports (1,500 units tracking operating hours). The total volume of documents to be developed equals 330,500 reports per year. This does not include records and reports required for modifications, maintenance, repairs, replacements, mandated plans and logs, or required re-surveys.

While EPA does allow aggregation of reports for multiple affected facilities, they still require that the aggregated reports contain all of the information required for each individual facility. As a result, aggregating reports does not reduce the burden. Each report is prescribed to have multiple inputs, each of which will have to be entered into a database system and reporting software systems will have to be developed and implemented to produce the requisite reports in a format yet to be determined by the rulemaking. Apache recommends that in lieu of thousands of individual monthly inspection reports, an annual report would be sufficient that affirms the devices were operated and maintained as required and that report could summarize the corrective actions taken during the reporting period.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60.

11.6 Applicability Dates

Commenter Name: James Martin
Commenter Affiliation: Noble Energy
Document Control Number: EPA-HQ-OAR-2010-0505-6852
Comment Excerpt Number: 4

Comment: The Environmental Protection Agency (EPA) has proposed that the New Source Performance Standards (NSPS) subpart OOOOa would become effective 60 days from the date the final rule is published in the Federal Register. Subpart OOOOa would then apply to all facilities constructed, modified or reconstructed after September 18, 2015. Noble submits that this implementation schedule would not be feasible for essentially all facilities operated by Noble, for several reasons.

First, EPA has requested comment on a large number and wide variety of complex matters. These include the critical questions of the appropriate survey frequency, whether a gas-to-oil ratio of 300 is the appropriate applicability threshold, whether the definition of low pressure gas well appropriately indicates hydraulically fractured oil wells for which a reduced emission completion would be technologically infeasible, whether optical gas imaging (OGI) or Method 21 should be allowed for resurveys of repaired components and whether 500 ppm is the appropriate repair threshold when Method 21 instruments are used, and the appropriate metrics for a step-down and step-up in survey frequency.

The large number of open questions raised in the preamble to the proposed subpart OOOOa creates significant uncertainty about what the final rule will require. This uncertainty will make it extremely difficult for Noble to know how to prepare to comply with the new subpart OOOOa reasonably cost-effectively. In short, this is a highly complex rule proposal package, with many unknowns acknowledged by EPA itself. Even once these uncertainties are clarified, Noble believes it will take far more than 60 days to bring facilities into compliance, even for the most sophisticated and well integrated ones. As such, Noble suggests EPA consider phasing in the rule effective date (see below).

Second, Noble's experience in developing an internal system for complying with the regulations adopted by the state of Colorado in 2014 to reduce emissions of VOCs and hydrocarbons from the upstream oil and gas sector demonstrates that operators will have to dedicate significant time and resources to developing internal systems to identify, track, and repair leaks. For example, Noble dedicated extensive human and financial resources on an expedited schedule to developing the software, acquiring hardware and equipment, and training personnel to conduct optical gas imaging (OGI) surveys of well sites and production facilities. Noble hired survey personnel and trained them to be capable of carrying out many minor repairs at the time of a survey. Noble accomplished this in a single oil and gas producing basin (the DJ Basin), which offered certain economies of scale because of the relatively dense development in the basin. Noble estimates that a minimum of a year will be required for our company to design and develop such systems for our operations located beyond Colorado; to obtain equipment, train personnel and complete related work required to comply with a leak detection and repair (LDAR) program.

Noble understands that some companies divided LDAR program responsibilities among different personnel, while others retained contractors to do these tasks. These different arrangements may impose their own time and resource constraints in coming into attainment with a fugitive emissions program. In addition, if EPA retains its component-based survey approach (see below for comments on this topic), Noble will have to hire even more personnel to visit every site at which a new well may be drilled from an existing site or an existing well will be fractured or refractured to conduct a component count, and then develop software systems to track component counts at each of those locations. While Noble is unable to estimate the time this task would require, we do know that it would entail training new personnel and outfitting them with trucks, as well as new software and hardware. In less densely developed basins, this task may require significant additional investments in time and resources.

For a company like Noble, this effort would require time to train personnel and then dispatch the trained teams to many thousands of production sites across the Country, some of which are widely dispersed. Noble believes this represents a problem that will be universally shared by all operators.

Third, implementing a technology-based LDAR program will create a high demand for essentially the only currently available and expensive OGI equipment, as well as tracking software, and trained personnel. At the present time, there are only a small number of companies that manufacture OGI equipment. Correspondingly there are a small number of vendors who have off-the-shelf software that could be used to manage surveys and repairs. This means that upon finalizing subpart OOOOa, a large number of companies will be pursuing a small universe of OGI manufacturers and software developers. It is highly probable that significant bottlenecks will develop in procuring this equipment, not to mention higher costs due simply to supply and demand. This practical problem can be addressed with a longer phase-in schedule, one which will also result in fewer instances of implementation-related compliance issues and less burden on already limited federal and state agency survey and enforcement teams.

It has been Noble's experience that significant time- a year or more- would be required to implement a fugitive emissions program Similarly, Noble will need more time in cases where well sites must be evaluated and either redesigned or plugged and abandoned if a new control device would be needed to accommodate a new pneumatic pump. The storage tank requirements also may require significant phase-in time, due not only to equipment manufacturing times, but also to ensuring all personnel installing and using them are well trained.

For all of these reasons, Noble strongly encourages EPA to consider an extended and staged compliance period to allow companies such as Noble to make the investments and find the skilled personnel and resources needed to meet the requirements of the final version of OOOOa.

Response: The final rule does not allow for an extended or staged compliance period, with the exception of implementation of pneumatic pumps requirements, new well completion requirements, and implementation of the fugitives emissions program. While the EPA appreciates the concern expressed by the commenters about our requests for comments in the preamble to the proposed rule, we point out that we were attempting to build upon our experience with previous rulemakings for the oil and natural gas production industry. We

received numerous comments on the previous rulemakings expressing concern that the EPA was trying to create a "one size fits all" rule that did not take into account the diversity of facilities, operations, procedures, and basins throughout the country. In response, we requested comment wherever we thought it may be important to take into account this diversity, or where we had unresolved technical concerns, so that owners and operators could provide specific information to better inform our decision making process. Although we understand from these comments that our requests for comments may have created some level of uncertainty on the part of stakeholders, we do not believe that any such uncertainty was so great that owners and operators could not adequately plan for implementation of the final rule.

We also note that owners and operators with affected facilities under subpart OOOOa likely also have affected facilities under subpart OOOO. Therefore, these owners and operators have already implemented internal systems for complying with subpart OOOO. Given the similarity between the two regulations, the majority of internal systems needed for compliance with subpart OOOOa should already be in place for these facilities. However, we recognize that in the near term there may still be some lingering unavailability of REC equipment. Although REC equipment suppliers have increased production to meet the demand for gas well completions under subpart OOOO, the affected facility under subpart OOOOa includes both gas and oil wells and will more than double the number of wells requiring REC equipment over subpart OOOO. We believe this demand will likely lead to a short-term shortage of REC equipment. However, based on the prior experience, we believe that suppliers have both the capability and incentive to catch up with the demand quickly, as opposed to the longer terms suggested by the commenters; they likely already stepped up production since this rule was proposed last year in anticipation of the impending increase in demand. Nevertheless, we have extended the initial compliance period for oil well completions to 180 days following the date of publication of the final rule in the Federal Register.

Based on comments received from OGI equipment suppliers and OGI service providers, we do not agree that there will be a shortage of OGI equipment or trained contractors on the effective date of the final rule. However, we agree with this and other commenters that owners and operators of both wells sites and compressor stations need time to complete critical steps in order to establish their program's infrastructure and build a foundation to assure continuous compliance. For these reasons, we are requiring in the final rule that the initial monitoring survey must take place by one year after the date of publication of the final rule in the Federal Register or within 60 days of the startup of production for well sites or 60 days after the startup of a new compressor, whichever is later. We believe that small businesses in particular may need this additional time to develop monitoring plans because they have less staff available for these activities. See sections VI.F.1.g and VI.F.2.f of the preamble to the final rule for more detail regarding this issue.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 13

Comment: EPA Must Recognize Implementation Challenges

Issue – As we learned in the development of Subpart OOOO, API urges EPA to exercise caution in the development of these rules to allow operational flexibility as it seeks "one size fits all" regulatory solutions. Consideration must be given to the implementation of these new rules to ensure industry is able to comply. Consistent with the original Subpart OOOO rulemaking, EPA should consider a similar compliance schedule for the proposed NSPS rule. We would also urge EPA to accommodate operators that are currently implementing leak monitoring and repair requirements, whether due to existing air permits, state or local regulations or voluntary commitments, to satisfy the federal rule requirements and minimize regulatory burden for those operators.

Recommendation – If promulgated as written, EPA should allow a phased implementation for completion, pneumatic pump, and leak detection and repair (LDAR) requirements to accommodate the number of affected facilities and the associated engineering, implementation and training needed to comply with the new rules.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337
Comment Excerpt Number: 109

Comment: If EPA continues to propose revisions to Quad Oa, it needs to consider whether it is written in a manner which industry is able to comply. In the 2012 NSPS rule, of the original implementation of Quad O, we filled out a phased-in approach for compliance. We believe EPA should consider whether or not a similar phased approach for compliance schedules is warranted for this proposed rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 109

Comment: My fourth point. We urge the EPA not to get in the way of the success story by developing one-size-fits-all regulatory solutions. Our industry is big. It's complex. And operations vary substantially across the nation. As we learned in the development of the 2012 NSPS rule, the EPA should exercise caution in the development of these new rules to allow operational flexibility as it seeks one-size-fits-all regulatory solutions. Industry must be able to comply with the requirements of these new rules. In the 2012 NSPS rule, the EPA allowed implementation for storage vessel requirements to be phased in to accommodate the vast number of affected facilities. The EPA should consider whether or not a similar compliant schedule is warranted in the proposed NSPS rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 56

Comment: Industry must be able to comply with the requirements of new rules. In the 2012 rule, EPA allowed implementation for storage vessel requirements to be phased in to accommodate the vast number of affected facilities. EPA should consider whether or not a similar compliance schedule is warranted in the proposed NSPS rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 64

Comment: We would also suggest the EPA consider delaying any implementation date and consider a phased-in approach.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: David McBride
Commenter Affiliation: Anadarko Petroleum Corporation

Document Control Number: EPA-HQ-OAR-2010-0505-6806
Comment Excerpt Number: 10

Comment: The proposed LDAR requirements are complex. Companies will need time to develop and implement a compliant program, and EPA has not allowed enough time for operators to achieve compliance. Specifically, EPA has co-proposed monitoring frequencies and solicited comment on several program elements for the LDAR requirements, thus we do not know the specific final requirements at this time. We appreciate the approach of EPA gathering information from interested parties. However, we believe strongly that EPA needs to reconsider and lengthen the compliance deadlines when multiple regulatory options are proposed.

To comply with the proposed requirements, operators must design and implement a complex LDAR tracking system and detailed survey operator training. The LDAR system must be capable of interacting directly with current internal maintenance tracking systems. In Colorado, the state air quality Regulation No. 7 includes LDAR provisions and provided operators 180 days to achieve compliance. Anadarko needed the entire time period to complete the necessary training, software development, software testing, and quality control for implementation of a compliant LDAR program. While an obvious point, the timing challenges in that instance involved one state's program, not a nationwide program. The implementation challenges in the Proposed Rule will be greater.

Anadarko believes there is a high likelihood that the program elements will change between the proposed and final rule, which hinders the company from initiating compliance actions at this time. Operators will need to wait for the final rule, for several reasons: any changes to the software must be designed, implemented, tested, and quality assured to assure the system is functioning properly; a change in the program elements will require the software elements to be re-worked to meet the final rule requirements; operators will need the software developers to conduct an evaluation of the software system to ensure new requirements are met; and any changes to the program elements will require re-training survey operators to ensure compliance with the program.

For these reasons, a 60-day compliance date is not an adequate time period to ensure that a compliant program can be implemented given the several program elements that have been proposed. The LDAR management program is sensitive to changes in program elements and at least 180 days of final rule is required to achieve compliance.

Solution: EPA must extend the effective date to at least 180 days from the date that the final rule is published to allow companies to develop and implement programs to comply with the final requirements. This proposed revision will affect several sections within the Proposed Rule.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 14

Comment: EPA Should Extend the Effective Date for the LDAR Monitoring Program

EPA's proposed rule does not allow enough time for operators to achieve compliance and the EPA must extend the compliance deadline to 180 days to allow adequate time for implementation. The proposed LDAR requirements are complex, and operators will need time to develop and implement a compliant program. Specifically, EPA has co-proposed several program elements for the LDAR requirements. For example, EPA co-proposes semi-annual and annual OGI monitoring frequencies and also solicits comment on quarterly monitoring. 80 Fed. Reg. at 56,595-96. As a result, operators do not know the specific LDAR requirements at this time. GPA understands EPA's approach to gathering information from interested parties and shares the goal of ensuring that EPA fully understands these issues before imposing complex regulations on operators. However, when multiple regulatory options are proposed, EPA must reconsider and lengthen the compliance deadlines so that operators have sufficient time to understand and incorporate EPA's final regulations into operating procedures.

To comply with the proposed requirements, operators must design and implement a complex LDAR tracking system and detailed survey operator training. The LDAR system must be capable of interacting directly with current internal maintenance tracking systems.

In light of EPA's many alternative proposals, GPA believes there is a high likelihood that the program elements will change between the proposed rule and final rule, which creates regulatory uncertainty and prevents its members from initiating compliance actions at this time. To avoid unnecessary and duplicative compliance efforts, operators will need to wait for the final rule to begin implementing the systems. Any changes that will affect the software must be designed, implemented, tested, and quality assured to verify the system is functioning properly. A change in the program elements that occurs between the proposed and final rule will cause the software elements to be reworked to meet the final rule requirements. Additionally, operators will need the software developers to conduct an evaluation of the software system to ensure new requirements are met. Finally, any changes to the program elements will require operators to retrain survey operators to ensure compliance with the program.

Owners and operators of affected sources will also have to acquire directly or contract with a third party to provide the equipment and staff to conduct the surveys. It will be impossible to meet a 60-day deadline to procure new devices, train operators, and implement a new program. In addition, third-party contractors will not be able to adequately staff or have enough OGI cameras to conduct the necessary surveys that could be subject to the final rule if EPA imposes an effective date that is 60 days after the final rule is issued. GPA understands that some OGI companies have commented that they will have sufficient supplies to meet the demand of the rule as proposed. However, these companies have a vested interest in supporting a rule that would vastly expand demand for their products. Moreover, it is GPA's members, and not the OGI companies, that will be subject to non-compliance penalties if those companies are unable to produce sufficient supplies. Therefore, EPA should discount the representations of these

vendors of technology that will financially benefit from the rule and provide an adequate cushion in case they cannot meet demand on their promised timeframe.

For these reasons, a 60-day effective date is not an adequate time period to ensure that a program can be implemented given the several program elements that have been proposed. The LDAR management program is sensitive to changes in program elements and at least 180 days is needed after final rule to achieve compliance for sources immediately subject to the regulation.

Therefore, GPA urges EPA to extend the effective date to at least 180 days from the date that the final rule is published to allow companies to develop and implement programs to comply with the final requirements.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 5

Comment: EPA should provide sources with up to a one year compliance extension from the compliance date(s) of the final rule on a case-by-case basis as approved by the local compliance authority. A source must demonstrate the limited availability of vendor or third parties or the inability to obtain required technologies (e.g. "Green Completions," Cover/Closed Vent Systems, Optical Gas Imaging (OGI) instrumentation) within 30 days from the effective date of the final rule. The source must further demonstrate no immediate threat to health or the environment. Many sources will require the utilization of off-site contractors and/or vendors to comply with the proposed requirements (e.g. Leak Detection and Repair (LDAR)).

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Urban Obie O'Brien
Commenter Affiliation: Apache Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6808
Comment Excerpt Number: 10

Comment: §60.5365a Effective Dates and Applicability for Facilities: A plain reading of §60.5365a establishes that all affected facilities constructed, modified, reconstructed, and brought on production between September 18,2015 and the effective date (possibly September 1, 2016) are subject to the applicable provisions of the Subpart OOOOa Final Rule. Apache believes that operators should become subject to the applicable provisions of Subpart OOOOa only after the rule is finalized.

Under §60.5365a as proposed, operators must construct and operate facilities for approximately a complete calendar year to meet the standards set forth in a rule that is still evolving. The fact that the Agency has solicited comments on approximately 125 technical and regulatory points in the Proposed Rulemaking demonstrates the rulemaking is in significant flux and the process was rushed to meet a policy deadline, without benefit of significant input from the regulated industry.

Apache believes that, based upon the number and nature of the requests for comments by the Agency, there is significant doubt about regulatory applicability and compliance differences between the Proposed Rule and the Final Rule for facilities constructed and operated in the interim between the Proposed and Final Rule. Therefore, operators would potentially be building and operating facilities to standards that may change significantly or never materialize. This is clearly inefficient and wasteful. Potentially affected facilities that would be exempt under the Proposed Rule may no longer be exempt under the Final Rule. Existing corporate LDAR programs may or may not be deemed to be equivalent to NSPS standards. Facilities that currently meet existing state requirements for recordkeeping and reporting would have to meet the Proposed Rule standards while EPA considers whether or not those same state standards are equivalent to NSPS. GOR thresholds for becoming an affected facility are in doubt. The list of regulatory issues that are not resolved is lengthy and the agency has questioned within the rule whether alternative requirements might be more appropriate. This considerable flux makes potential compliance uncertain and puts companies at risk of non-compliance at facilities constructed and operated during the rulemaking process. As a result, at the very least, any new rule should only apply to facilities constructed after the rule has become final and effective.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Mike Gibbons, Vice President – Production
Commenter Affiliation: CountryMark Energy Resources, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6241
Comment Excerpt Number: 4

Comment: Assuming that the final regulation will be published to the Federal Register in mid-2016, we believe that this compliance date is not realistic. Given the uncertainty in the regulation from all of the solicitations for comment, potential shortage of compliance equipment (i.e. completion equipment and Optical Gas Imaging (OGI) cameras), Certified Professional Engineers, and qualified third party companies to perform compliance surveys we do not believe that our industry can be ready to comply with this regulation within suggested timeframe.

We believe that the uncertainty in the proposed regulation, due to all of the solicitations for comment, will result in owners and operators being reluctant to commit resources toward any substantial compliance activities until the final regulation has been published in the Federal Register. With the price of oil falling by greater than 60% over the past twelve months, all of the owners and operators are focusing on cash conservation and only investing in necessary activities.

After the final regulation is published in the Federal Register, our industry will be required to read and interpret the regulation, develop training for our employees, train our employees, develop a corporate compliance program, construct a data management system, purchase required equipment for compliance, and develop contracts to complete survey work within 60 days. We believe that most of this work will need to be completed after the final regulation is published because of the uncertainty already discussed. We do not believe that 60 days is a realistic time period to implement this program. We recommend that the compliance date be 24 months after publication in the Federal Register.

Further, we do not believe that third party companies will be willing to invest significant amounts of time or capital into developing service offerings until they can be assured that they can recover their investment. Some companies may be willing to incur the risk by being early movers into the market, but this will not be sufficient for the entire sector to achieve compliance.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2010-0505-6854
Comment Excerpt Number: 7

Comment: Timing of Rule Implementation and Implementation of LDAR and Other Requirements: The Proposed Rule requires implementation too quickly after finalization of the Proposed Rule. The number of affected sources, amount and extent of consultants required to attain compliance, availability of equipment, and unpredictable weather all necessitate a longer implementation period. This is particularly true for the LDAR requirements, as discussed in further detail below.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6852, Excerpt 4.

Commenter Name: Jill Linn, Environmental Manager
Commenter Affiliation: WBI Energy Transmission, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6939
Comment Excerpt Number: 20

Comment: §60.5410a - Definition of Initial Compliance Period

- WBI Energy requests clarification on what triggers the end of the initial compliance period for a new source subject to this rule. The proposal indicates that the initial compliance period would begin either upon startup of the facility or (60 days after publication of the final rule in the Federal Register). The initial compliance period ends no later than one year after startup or no later than one year after (60 days after

publication of the final rule in the Federal Register). WBI Energy requests clarification as to whether the initial compliance period ends one year after startup of the source, December 31st the year of facility startup or final compliance with the requirements in §60.541 Oa.

If the initial compliance period ends after compliance with all the requirements in §60.541 Oa is achieved, then the initial annual report will have to be submitted during the initial compliance period which contradicts what is required in 60.5420a(b) which requires the initial annual report be submitted no later than 90 days after the end of the initial compliance period.

Response: Paragraph 60.5370a(a) of the final rule states that you must be in compliance with the standards of subpart OOOOa no later than 60 days after the date the final rule is published in the Federal Register or upon startup, whichever is later. This is the beginning of the initial compliance period. The introductory text of §60.5410a states that the initial compliance period ends no later than 1 year after the initial startup date for your affected facility or no later than 1 year after the date the final rule is published in the Federal Register. You have the option of ending the initial compliance period after less than one year, for example, if you would like to align the filing date of your annual report with other reports. Paragraph 60.5420a(b) then specifies that the initial annual report is due no later than 90 days after the end of the initial compliance period. Subsequent annual reports are due no later than same date each year as the initial annual report.

We also note that, in response to comments, we have changed the beginning of the initial compliance period in the final rule as follows. For well completion operations of subcategory 1 wells that commence up to 180 days after the date of publication of the final rule in the Federal Register, flowback gases must be routed to a completion combustion device. Well completion operations commencing on or after 180 days after the date of publication of the final rule in the Federal Register must perform a REC if technically feasible. See section VI.E.5 of the preamble to the final rule for more detail regarding this issue. For pneumatic pumps, the initial compliance period begins 180 days after the date of publication of the final rule in the Federal Register. See section VI.D.8 of the preamble to the final rule for more detail regarding this issue. The initial monitoring survey of the fugitive emissions monitoring program must take place by one year after the date of publication of the final rule in the Federal Register or within 60 days of the startup of production for well sites or 60 days after the startup of a new compressor, whichever is later. See sections VI.F.1.g and VI.F.2.f of the preamble to the final rule for more detail regarding this issue.

11.7 Other Comments

Commenter Name: Eric Schaeffer, Sparsh Khandeshi and Adam Kron, Environmental Integrity Project (EIP) on behalf of Adrian Shelley III, Executive Director
Commenter Affiliation: Air Alliance Houston et al.
Document Control Number: EPA-HQ-OAR-2010-0505-6953
Comment Excerpt Number: 18

Comment: EPA Must Require Necessary Compliance Assurance for Operators Using VRUs

The existing compliance requirements in NSPS Subpart OOOO and the Proposed Rule's compliance requirements allow facilities two options for determining initial compliance with the 95-percent control requirement when using a VRU: (1) conduct an initial performance test that shows that emissions at the outlet of the control device have been reduced by 95 percent from the inlet concentration, or (2) perform a design analysis of the contemplated control device to demonstrate that it will satisfy the 95-percent control requirement. These options do not guarantee compliance because operators are not required to measure or otherwise verify the total amount of gas routed to the VRU as compared to other uncontrolled vents.

EPA and state regulators have observed on numerous instances detectable emissions from storage vessel pressure relief devices. EPA has stated that it suspects such emissions are caused by operators under-sizing VRUs and/or because VRUs are poorly operated and maintained. Releasing even 6 percent of the gas to the atmosphere from a PRD instead of routing it to a VRU would result in a violation of the standard, even if the control device were achieving 100-percent control. Under more realistic 98-percent control efficiency scenarios, a facility would be in violation if it released just 3 percent of the gas. According to EPA, emissions released because of poor maintenance or inadequately sized VRUs can be significant. Commenters provide two recommendations to address this issue:

1. Operators Must Monitor Total Gas Routed to VRUs and Released by PRDs

EPA must require operators to monitor the total amount of gas routed to a VRU as well as the amount of gas released from PRDs. Measuring the amount of gas, in combination with a performance test that verifies the control efficiency of the VRU would enable the operator to demonstrate compliance with the 95% control requirement.

2. Operators Must Design Control Devices Based on Maximum Gases Routed to the Control Device

For operators that opt to submit a design analysis instead of conducting a performance test, EPA should require those operators to design the control device based on the maximum expected flashing, breathing, and working gases that would be routed to the control device. EPA's Compliance Alert indicates that at least part of the problem causing operators to vent emissions from storage vessels is because the VRUs are not designed for peak capacity. This can cause backflow from the VRU and cause emissions to be released from a PRD. Requiring operators to

design for these "dump events" can help alleviate the problem. Operators that select this compliance option must also be required to monitor the total amount of gas routed to a VRU and the amount released from PRDs. Good design does not guarantee that an operator will conduct adequate maintenance or operate the VRU properly and monitoring is still necessary to verify that the gas released does not exceed the 95-percent control requirement.

If EPA determines that monitoring the volume of gas routed to the control device and any pressure relief device is technically or economically infeasible, EPA should require facilities to install alarms that notify the operator whenever material is released from a PRD and the duration of the release. EPA's recently proposed refinery rule includes similar provisions. Under this option, operators should be required to report all release events, the duration of the event, and the total amount released based upon calculations using process data records during the day of the release. Further, EPA should require facilities to perform a root cause analysis for each of these releases and take any necessary corrective action. EPA must also require operators to report the total amount of gas and submit the data necessary to determine if the total amount of emissions released (between the VRU and any PRD releases) was greater than 95 percent of the total gas flow from the storage vessel. This data would include: (1) the control efficiency of the VRU, (2) the total amount of gas routed to the VRU, and (3) the calculated amount of gas released from the PRDs.

Response: The EPA agrees with the commenter that the final rule requires that emissions from affected sources, such as certain storage vessels, must be routed to a control device which achieves the required reduction in pollutants. This includes pressure relief devices which are routed through closed vent systems to control devices. The closed vent systems are subject to the final rule provisions which require certification by a qualified professional engineer that the closed vent system is properly designed to ensure that all emissions from the unit being controlled in fact reach the control device and allow for proper control. They are also subject to continuous compliance requirements for covers and closed vent systems that require no detectable emissions. Finally, bypass devices, including pressure relief devices that vent to the atmosphere, must be equipped with a flow indicator and alarm. The EPA believes that these requirements are sufficient to ensure the emissions from affected sources make their way to the control device and we do not agree that additional monitoring or notification is needed.

Commenter Name: John Hampp
Commenter Affiliation: NextEra Energy, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6873
Comment Excerpt Number: 10

Comment: Compliance Obligations

We urge EPA to clarify in the final rule that compliance for a specific piece of equipment is only required by those companies(s) with common control over that equipment. A given site in the gas infrastructure industry often contains equipment that may be controlled by one set of companies(s) with adjacent equipment at the same site controlled by different companies(s). This

will provide clarity for compliance obligations to those sites with multiple entities that have no contractual ties to one another.

Response: The introductory text of §60.5365a states that "[y]ou are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (j) of this section for which you commence construction, modification or reconstruction after September 18, 2015." Therefore the owner or operator is responsible for complying with the applicable standards. The commenter should be mindful, however, of the definition of "owner or operator" in §60.2 of the General Provisions which states that owner or operator means "any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part."

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 44

Comment: Issues Related to GPA's Prior Petitions for Reconsideration

A. EPA Must Clarify That Compressors, Pneumatic Pumps, and Storage Devices Are Exempt from Generally Applicable Notification Requirements

GPA appreciates EPA's efforts to address our concerns about reconstruction notifications for compressors, pneumatic pumps, and storage tanks. A continued dialogue between the agency and regulated entities is essential to ensure that regulations are effective in achieving their goals in an efficient and cost-effective manner. In response to GPA's requests, EPA attempted to clarify that notification requirements for such affected facilities would be governed by the specific requirements in Subpart OOOO instead of the generally applicable notification provisions for the NSPS program. EPA also appropriately attempted to apply the same approach in Subpart OOOOa. While GPA appreciates EPA's efforts in this regard, several further modifications are needed to fully implement these changes in both Subparts OOOO and OOOOa.

First, in Table 3, EPA states that 40 C.F.R. § 60.15(d) "does not apply to pneumatic controllers, centrifugal compressors, or storage vessels." GPA agrees that these devices should not be subject to 40 C.F.R. § 60.15(d). However, GPA is unsure why this exclusion was not also extended to reciprocating compressors, as EPA has done in the past. See, e.g., 40 C.F.R. § 60.5420(a)(1) (extending exclusion to gas wells, pneumatic controllers, centrifugal compressors, reciprocating compressors, and storage vessels). GPA urges EPA to correct this apparent oversight by revising Table 3 to include reciprocating compressors.

Second, to ensure consistency between Table 3 and 40 C.F.R. § 60.5420, GPA requests that the latter provision be revised to clarify that these devices are also excluded from the requirements of 40 C.F.R. § 60.15(d). Specifically, GPA requests that 40 C.F.R. § 60.5420(a)(1) be revised as follows: "If you own or operate a gas well, pneumatic controller, centrifugal compressor,

reciprocating compressor or storage vessel affected facility you are not required to submit the notifications required in §§60.7(a)(1), (3), and (4) and 60.15(d)."

Third, EPA's initial revisions to remove construction, startup, and modification notification requirements for reciprocating and centrifugal compressors, created an inconsistency between 40 C.F.R. §§ 60.5420(a)(1) and 60.5410(b)(6). Specifically, 40 C.F.R. § 60.5410(b)(6) still requires sources to comply the provisions 40 C.F.R § 60.7(a)(1), (3), and (4) while 40 C.F.R. § 60.5420(a)(1) excludes them from complying with those provisions. GPA urges EPA to delete 40 C.F.R. § 60.5410(b)(6) to ensure consistency between the regulations.

Further, in the proposed rule for Subpart OOOOa, EPA has copied the same defective language used in Subpart OOOO. Therefore, GPA requests that EPA make conforming changes to Table 3 to Subpart OOOOa, Proposed 40 C.F.R. § 60.5420a(a)(1), and Proposed 40 C.F.R. § 60.5410a(b)(6) to ensure that compressors, pneumatic pumps, and storage devices are also excluded from the generally applicable notification requirements under Subpart OOOOa.

Response: The EPA received an administrative petition that raised the issue of notification of reconstruction requirements under §60.15(d) as unnecessary for some affected facilities. After consideration, the EPA agrees that some notifications are unnecessary because the EPA specifies notification of reconstruction for affected unit pneumatic controllers, centrifugal compressors, and storage vessels under sections §60.5410a and §60.5420a in lieu of the general notification requirement in §60.15(d). To make this change effective, the EPA proposed this change in the explanatory comments in Table 3 reflecting that §60.15(d) is not applicable to affected facility pneumatic controllers, centrifugal compressors, and storage vessels in OOOOa. We are finalizing this change as proposed.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 87

Comment: EPA Should Remove the Recordkeeping Requirements for Control Devices and Closed Vent Systems

As discussed in Section 24.3.1, EPA's costs for controlling pneumatic pumps not located at a natural gas processing plants did not include the cost of the recordkeeping and reporting requirements in the cost estimate. The recordkeeping and reporting requirements that EPA has included are burdensome in some cases and expand requirements to non-affected sources.

- §60.5420a(b)(8)(i) requires certification of non-affected sources (See also Section 24.4.8).
- §60.5420a(b)(8)(v) requires testing data to be submitted that is not accounted for in the cost analysis, not cost effective when included, and not needed based on the exhaust gas being natural gas, which is the same as the pilot of the combustion device. EPA should

remove the combustion control device testing, monitoring, reporting, and recordkeeping requirements.

- §60.5420a(c)(16)(i) – It is not clear what EPA means by records of "the manufacturer specifications". EPA should clearly specify what they want here. It is assumed this refers to the make and model of the pump.
- §60.5420a(c)(16)(iii) – This provision requires continued tracking of the data of a pump being constructed, reconstructed, or modified at a non-natural gas processing plant location that did not have a control device that later has one installed. Pumps should only be triggered at the time the pump is installed. Labor intensive compliance tools will be required to track the location of the pumps as they move from site to site. The cost of these systems and the manpower to maintain them were not included in EPA's cost of control.
- §60.5420a(c)(16)(iv) – As discussed in Section 24.3.1, EPA should remove the combustion control device testing, monitoring, reporting, and recordkeeping requirements as they are not accounted for the in the cost and not cost effective once included.
- §60.5420a(c)(16)(v) appears to reference the wrong requirements in the rule. It shows that the photograph with latitude and longitude would be a substitute for the records for the control device monitoring and testing. It should refer to the location, make, and model requirements under (i).

In many instances, these controls have been installed under a state permit (or other regulatory requirement) and have compliance assurance requirements associated with those requirements. It is inappropriate to add new compliance assurance requirements that may conflict to the original requirements the control device was installed to meet. Additionally, the control device may not be able to meet or be retrofitted to meet (i.e. install sample ports) to meet the compliance assurance requirements of OOOOa.

API recommends the following amendment to the rule language §60.5420(b) and (c):

§60.5420(b)(8) For each pneumatic pump affected facility, the information specified in paragraphs (b)(8)(i) through (v) of this section.

~~(i) In the initial annual report, a certification that there is no control device on site, if applicable.~~

(ii) An identification of each pneumatic pump constructed, modified or reconstructed during the reporting period, including the identification information specified in §60.5393a(a)(2) or (b)(2).

(iii) An identification of any sites which contain natural pneumatic pumps and which installed a control device during the reporting period, where there was no control device previously at the site.

(iv) Records of deviations specified in paragraph (c)(16)(ii) of this section that occurred during the reporting period.

~~(v) If complying with §60.5393a(b)(1) with a control device tested under §60.5413(d), which meets the criteria in §60.5413(d)(11) and §60.5413(e), records specified in paragraphs (c)(16)(iv)(A) through (G) of this section for each pneumatic pump constructed, modified or reconstructed during the reporting period.~~

§60.5420a(c)(16) For each pneumatic pump affected facility, you must maintain the records identified in paragraphs (c)(1)(i) through (iv) of this section.

(i) Records of the date, location and ~~manufacturer specifications~~ make and model for each pneumatic pump constructed, modified or reconstructed.

(ii) Records of deviations in cases where the pneumatic pump was not operated in compliance with the requirements specified in §60.5393a.

(iii) ~~Records of the control device installation date and the location of sites containing pneumatic pumps at which a control device was installed, where previously there was no control device~~ at the site.

(iv) ~~Except as specified in paragraph (c)(16)(iv)(G) of this section, records for each control device tested under §60.5413a(d) which meets the criteria in §60.5413a(d)(11) and §60.5413a(e) and used to comply with §60.5393a(b)(1) for each pneumatic pump.~~

~~(A) Make, model and serial number of purchased device.~~

~~(B) Date of purchase.~~

~~(C) Copy of purchase order.~~

~~(D) Location of the pneumatic pump and control device in latitude and longitude coordinates in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the~~ North American Datum of 1983.

~~(E) Inlet gas flow rate.~~

~~(F) Records of continuous compliance requirements in §60.5413a(e) as specified in paragraphs (c)(16)(iv)(F)(1) through (4) of this section.~~

~~(1) Records that the pilot flame is present at all times of operation.~~

~~(2) Records that the device was operated with no visible emissions except for periods not to exceed a total of 2 minutes during any hour.~~

~~(3) Records of the maintenance and repair log.~~

~~(4) Records of the visible emissions test following return to operation from a maintenance or repair activity.~~

(G) As an alternative to the requirements of paragraph (c)(16)(iv)(D) of this part, you may maintain records of one or more digital photographs with the date the photograph was taken and the latitude and longitude of the pneumatic pump and control device imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital photograph, the digital photograph may consist of a photograph of the pneumatic pump and control device with a photograph of a separately operating GIS device within the same digital picture, provided the latitude and longitude output of the GIS unit can be clearly read in the digital photograph.

Response: The EPA disagrees with the commenter that we did not account for the cost of recordkeeping and reporting requirements for pneumatic pumps located at sites other than natural gas processing plants. We believe that the commenter is referring to the costs presented in the TSD for the proposed rule. If so, the costs presented in the TSD are the costs that we estimate will be incurred for implementing the BSER level of control. Recordkeeping and reporting costs are not included in the TSD costs. Rather, the recordkeeping and reporting costs estimates are presented in the ICR and Supporting Statement, which can be found in the docket. A summary of the Support Statement costs are presented in section X.B of the preamble to the final rule. Additionally, due to a drafting error in the proposed rule, the pneumatic pump affected facility was more narrowly defined than intended and this resulted in records requirements for seemingly unaffected sources, which was not our intent. The final rule clarifies the applicability to all diaphragm pumps at well sites and natural gas processing plants, regardless of whether a control device is on site or not.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 33

Comment: The Proposed Testing, Monitoring, and Other Compliance Assurance Requirements are Inappropriate for the Oil and Natural Gas Industry

12.2.1 The NESHAP-Level Approach for Compliance Assurance is Inappropriate and Unrealistic for Oil and Natural Gas Production Sites

For the most part, EPA has copied the full MACT control device and compliance assurance requirements in NESHAP HH (40 CFR 63, Subpart HH) for Subpart OOOOa rather than craft cost-effective requirements tailored to address the unique situations related to oil and natural gas operations. The capital cost of the control device is trivial in comparison to the cost of the performance tests, monitoring, recordkeeping, etc. for complying with NESHAP HH. These ongoing operating and maintenance costs were not adequately considered by EPA in the cost effectiveness determination for Subpart OOOOa. Furthermore, Subpart OOOOa applies to dispersed locations that do not have electricity, may not have automation and may have limited space for existing automation to accept additional inputs into their programmable logic controller (PLC) and remote transmitting unit (RTU) space. Although it may be appropriate to evaluate

control devices similar to those found in NESHAP HH major sources, it is not appropriate to arbitrarily invoke compliance assurance requirements intended for the maximum control of hazardous air pollutants (HAPs) as the standard for an NSPS regulation for the control of volatile organic compounds (VOCs) or methane.

Examples of the inappropriateness of invoking MACT compliance assurance requirements for NSPS include but are not limited to:

- §60.5417a(a) requires Continuous Parameter Monitoring System (CPMS) for control devices. EPA did not include the cost for installing, maintaining, and operating a CPMS in any of the impact assessments for this rulemaking. Most affected facilities in the production segment of the industry will be located in remote areas without available electricity or limited remote transmitting unit (RTU) space. In addition, a programmable logic controller (PLC) is often needed to record, average, and analyze the large amounts of data to determine if a parameter is exceeded, resulting in activation of a control system or signal for site visit evaluation. The calibration, maintenance, and repair of a CPMS requires specialized crafts knowledgeable in instrumentation and controllers. This work cannot be performed by lease operators during normal inspection visits.
- §60.5417a(f)(1) requires the operator to establish minimum and/or maximum values for the operation parameter and operate the control device within the range. As explained in section 12.3.4, this requirement is impractical to meet for either manufacturer certified combustors or combustion controls where the performance test is performed in the field, but for different reasons. This requirement is the same as the NESHAP HH requirement located in §63.773(d)(5)(i)(a) & (c).
- Similar to above, §60.5417a(d)(1)(iii) requires that a flare pilot, used for centrifugal compressors and pneumatic pumps controls, be assured by a heat detection sensor and continuous controller. Section 60.5417a(a) makes this appear to be a CPMS requiring all of the assurance provisions of (c), (f) and (g). This requirement is essentially identical to the one in §63.773(d)(3)(i)(C) with the CPMS general provisions located §63.773(d)(1) requiring to meet (4), (6), & (7). Requiring a pilot monitoring device to meet the requirements for a CPMS is extremely burdensome for any rule but is unprecedented for NSPS regulations.
- Compliance Demonstrations (§60.5412a) and Test Methods (§60.5413a). EPA reference methods that determine percent reduction on a mass basis, as is specified in Subpart HH major source control requirements where Subpart OOOOa does not specify percent reduction of a pollutant on a mass basis. This causes the measurement of volume that is not practical or in many cases possible with the types of operations and fluid flows typical for these facilities.

12.2.2 Compliance Assurance Requirements Are Unnecessarily Complex

The use of extensive cross referencing both between sections concerning control devices (i.e. §60.5412a for initial compliance requirements, §60.5413 for performance testing, and §60.5417a for continuous monitoring requirements) and various test methodologies renders the requirements confusing and nearly impossible to follow. These segmented requirements unnecessarily add to the compliance burden and are likely to lead to errors and

misunderstanding. Companies that operate stationary sources subject to EPA's NSPS and NESHAP regulations may have personnel whose sole job is to understand EPA's complex requirements. However, many companies regulated by Subpart OOOOa are primarily small businesses that do not have this luxury. API members, along with the consultants they have hired, have had difficulty in interpreting the requirements for control devices as proposed. There is still not agreement of interpretation within API with many of the provisions.

Response: First, the EPA disagrees that we did not, or did not fully, account for the costs associated with the monitoring, recordkeeping and reporting requirements of the proposed rule. We refer the commenter to our response for DCN EPA-HQ-OAR-2010-0505-6857, Excerpt 60, for an explanation of where we accounted for these costs. That comment response also details where we have reduced monitoring, recordkeeping and reporting requirements where possible in the final rule.

Second, we disagree that it is not appropriate to use the type of monitoring, recordkeeping and reporting in an NSPS rule that is typically found in a NESHAP rule. There is nothing inherent in section 111 of the CAA that necessitates some reduced level of compliance certification compared to that of section 112. We are well aware of the remote nature of many of the facilities subject to subpart OOOOa, and we believe we have appropriately taken this into account throughout the rule, even though some of the compliance requirements mirror those found in NESHAPs.

We are sensitive to the commenter's concern about cross-referencing within subpart OOOOa and the confusion that this can sometimes cause. In the final rule, we have reduced the cross-referencing to the extent possible. However, some level of cross-referencing is inevitable since the standards, compliance requirements, and recordkeeping and reporting requirements are in different sections of the rule. The standards must cross-reference the compliance and recordkeeping and reporting requirements so that the owner or operator is aware of the applicable requirements.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 181a

Comment: Compliance Assurance Requirements for Enclosed Combustion Control Devices

12.3.1 The Proposed Compliance Assurance Requirements May Discourage the Use of Enclosed Combustors

The design of enclosed combustors intrinsically yields higher destruction efficiencies than flares because of the heater style of burner and protection from cross wind. The enclosure also creates an induced draft of air that aids complete combustion of heavier (higher molecular weight) hydrocarbon streams. Additionally, the enclosure isolates the flame from sight that may cause

concern to some members of the public. These benefits sometimes encourage industry to install the high cost internal (i.e., "enclosed") combustor instead of the commonly used open flame flare. Enclosed combustors do have the ability to be performance tested where the open nature of flares do not. It is ironic that EPA is requiring substantially more burdensome monitoring and performance testing requirements for enclosed combustors in the proposed rule even though these combustors have greater environmental benefit than flares. It is counterproductive for the environment to disadvantage enclosed combustors with compliance assurance requirements just because they are technically feasible. EPA should encourage the use of enclosed combustors by using the same visual inspection requirements as with flares for opacity.

12.3.4 It Is Not Technically Feasible To Meet the CPMS Flow Measurement Requirements for Manufacturer Certified Combustion Control Devices

Paragraph 60.5417a(f)(1)(iii) requires that for manufacturer certified enclosed combustors, an operator must install CPMS measurement on the inlet flow to assure that the flow is not greater than the maximum or less than the minimum that the manufacture specifies. The CPMS requirements only apply to centrifugal compressors (that have relatively stable flow rates) and pneumatic pumps, but the same control devices will often be controlling emissions from storage vessels as well. As explained in section 12.1.3, the measurement of flow from storage vessels is very difficult even when only the normal emissions must be measured. Requiring both the minimum and maximum range to be measured, it is doubtful if a single instrument can measure both values. The pump flow as well is intermittent, low pressure, low velocity/flow and difficult to measure as discussed in Section 24.0.

Response: The EPA did not intend to discourage the use of enclosed combustion devices. We believe that when operated properly, enclosed combustion devices can yield high destruction efficiencies. We have revisited the compliance requirements for the control devices in the final rule and have revised them to ensure that we are not discouraging the use of enclosed combustion devices. We have removed the requirement to comply with both the minimum and maximum flow to the device and instead are requiring compliance with only a maximum flow rate, as we are concerned with sources overwhelming the unit. We did not intend to require owners and operators to achieve a minimum amount of flow to the unit. We are also adding an option to allow owners or operators to retest the manufacturer tested units periodically in lieu of continuously monitoring the flow. This option provides compliance assurance that the unit is operating properly, but removes the burden of continuous monitoring. Because these units are subjected a rigorous test by the manufacturer, we believe that periodic monitoring is acceptable.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 181b

Comment: Compliance Assurance Requirements for Combustion Control Devices with CPMS

12.3.2 The Continuous Parameter Monitoring System (CPMS) Provisions For Centrifugal Compressors and Pneumatic Pumps Are Inappropriate

API supports the EPA's proposal to not require CPMS or other monitoring systems on storage vessel combustion control devices. As will be discussed below, API does not understand the value of the CPMS requirements that are proposed for combustion control devices for centrifugal compressors and pneumatic pumps. Installing and operating a continuous pilot and the use of visual inspection for opacity (as required for storage vessel affected facilities in §60.5412a(d)(1)(ii) & (iii)) is adequate to assure complete combustion and encourages the use of enclosed combustors. The only additional compliance assurance procedure should be to check the air vent per manufacture recommendations any time opacity is seen (as required in §60.5417(h)(1)(A)).

12.3.3 The Determination of CPMS Range Determinations in Field Performance Test Is Technically Impractical

Section 60.5417a(f)(1) requires that for any parameter that requires CPMS monitoring, the operator must determine the minimum or maximum value of the parameter that continuously achieves the performance requirements in §60.5412a(a). Section §60.5417(f)(1)(i) requires a performance test performed by the operator to determine the minimum or the maximum operating parameter based values measured during the performance test. However, the operator has limited ability to adjust the conditions of the process to test the control device. The performance test must be run at the conditions available when the test is scheduled. The operator is unable to vary the operating conditions to determine the limit of the operating parameter as a manufacturer does when conducting a shop test on an enclosed combustor. Section 60.5417a(f)(1)(i) cannot practically be complied with, because the performance test cannot be completed at the full range of conditions for which the control device will be operated. Furthermore, this extends far beyond what EPA requires for testing control devices at area sources under NESHAP HH, which applies to nearly all oil and natural gas production sites. In fact, the requirements approach the NESHAP HH requirements for major sources like natural gas processing facilities. For NSPS at a remote, unmanned site, it is more reasonable to test the device during current operating conditions.

Response: The EPA disagrees that the CPMS requirements are not necessary on certain control devices. Because many control devices will be located in remote, unmanned locations, there will not be personnel on site to verify proper operation of the control device. Continuous monitoring helps to ensure that proper operation of the control device is maintained. This is especially important as opacity monitoring only occurs once per month.

In general, it is the EPA's policy that stack testing be performed at conditions that represent the range of conditions under which the facility is likely to operate and challenges the emissions control measures of the facility, as the emissions test is meant to prove that the facility will be in continuous compliance with the emissions standard. (See Clean Air Act National Stack Testing Guidance, April 27, 2009, at https://www.epa.gov/sites/production/files/2013-09/documents/stacktesting_1.pdf.) This policy applies to testing under both the NSPS and NESHAP regulations. It is also common throughout most of the NSPS and NESHAP regulations

to require the CPMS limits to be based on performance testing. We also note that a repeat performance test can be performed at any time in order to change the operating limit of the CPMS. Finally, because we recognize that oil and natural gas production fields can create challenging test conditions, as it can be difficult to determine what range of conditions may exist over the life of the facility (or the five-year test period), there is an allowance in §60.5417a to supplement performance test data with manufacturer recommendations when setting operating limits on CPMS. Based on these considerations, we do believe that it is appropriate and practical to set CPMS limits based on the performance test.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 47

Comment: EPA Should Not Be Seeking Comment Under Specific Rulemaking Packages for "Next Generation Compliance" Approaches That Could Be Expected to Have Broad Applicability

The general next generation compliance topics for which EPA is seeking input in Section X of the preamble of the NSPS proposal (i.e. Use of Third-Party Verification, Third-Party Reporting, and expansions of Electronic Reporting) are broad issues that should not be addressed as part of sector-specific rulemakings.

Additionally, in whatever context considered, any Next Generation Compliance elements should clearly be shown to aid in the demonstration of compliance to EPA and not substitute non-EPA entities to perform EPA's responsibilities. The measures outlined in the preamble are unnecessarily punitive for a rule of general applicability.

Response: The EPA's Next Generation Compliance and rule effectiveness strategies, in and of themselves, impose no requirements or obligations on the regulated community. The strategies establish no regulatory terms for any sector or facility nor create rights or responsibilities in any party. Rather, the strategies describe general compliance assurance and regulatory design principles, approaches, and tools that EPA may consider in conducting rulemaking, permitting, and compliance assurance, and enforcement activities. For this rulemaking, the EPA has provided notice and opportunity to comment for all of the specific regulatory requirements applicable to the sector and facilities covered by the rulemaking, either through proposed regulatory language or a description in the preamble.

See section VIII.H.3 of the preamble to the final rule for more information regarding this issue.

Commenter Name: D. Solis
Commenter Affiliation: Citizen

Document Control Number: EPA-HQ-OAR-2010-0505-5298
Comment Excerpt Number: 2

Comment: Said that, since the VOC and methane are essentially reduced by the same controls and have already been regulated in the past, this industry is ready to undertake this regulation and to innovate in clean technologies in order to evolve with the changing world. One of the things I believe is crucial for this plan, and that it is only half way in effect, is that the rule expects to have technological advances in the future that might reduce the cost of implementing the guidelines and even making it easier to comply with. What this rule is not considering is in implementing a more effective and permanent regulation for sources that need to comply with more than one reduction system, they are taking the risk that certain technologies for each pollutant could be obsolete in a near future and they might not be enough to comply with all the regulations. BSERs should be designed in a way they could be applied to more than one pollutant in the best adequately demonstrated technology, without being too specific on the system in order to avoid shutting doors in the future for technologies and cost related risks.

I see enforcement of this rule as a challenge and should be addressed with incentives to reduce emissions instead of penalties for not complying; the industry should be interested in complying because it reduces (i) their overall losses of natural gas through the leaks giving them more raw material to work with or sell and (ii) they should feel morally obliged, and not just to avoid fines or penalties. EPA should avoid excessive regulations in the natural gas industry because it is a major player in the transition proposed under the Clean Power Plan, however in my opinion it's also important to get the players of the industry work together and determine specific consequences to not complying with the rules. By reading their proposed guidelines it seemed to be that there are too many rules and not the equivalent consequences to not abiding by them.

Response: The EPA appreciates the support provided by the commenter. We agree that the standards should be flexible enough to allow emerging technology to be used by owners and operators. We also remind the commenter that BSER specifies a level of control to be achieved, not the manner in which that level of control is achieved. Thus, each owner or operator is free to choose the emission reduction technology best suited to his or her needs.

One area of the final rule that we do specify a particular technology is the fugitive monitoring provisions of §60.5397a that specify either OGI or Method 21 for detecting fugitive emissions. Fugitive emissions monitoring technology is an evolving industry and methane leak detection technology is undergoing continuous and rapid development and innovation, potentially yielding, for example, continuous emissions monitoring technologies. As described in section 111(h)(3), the Administrator may approve an alternative means of emission limitation for a work practice standard if it can be proven that an equal reduction in emissions will be achieved. In the final rule, we are outlining the process for the agency to approve an alternative means of emission limitation and have identified specific criteria that would be needed for us to expeditiously evaluate the emerging technology, keeping in mind the range of approaches that these technologies use to detect fugitive emissions (see §60.5398a).

The EPA acknowledges that there is a rapidly growing push to develop and produce low-cost monitoring technologies to find methane emissions sooner and at lower levels than current

technology allows, thus enhancing the ability of operators to detect fugitive emissions at well sites. Many of these technologies are still in the development or prototype phase, and specific information needed to assess the viability of these technologies, such as detection capabilities, operating parameters and costs, is not yet available. The EPA agrees that continued development of these cost effective technologies is important and that the final rule should encourage and accommodate it to the extent possible. However, we are also mindful of our obligation to ensure that monitoring technologies meet established standards that ensure accurate and precise measurement and recording of data.

To address these objectives, we are establishing in the final rule a process for the agency to approve an alternative means of emission limitation that identifies specific criteria that would be needed for us to expeditiously evaluate the emerging technology. These criteria include a description of the emerging technology and the associated monitoring instrument or measurement technology; a description of the method and data quality used to ensure the effectiveness of the technology; a description of the method detection limit of the technology and the action level at which fugitive emissions would be detected; a description of the quality assurance and control measures employed by the technology; field data that verify the feasibility and detection capabilities of the technology; and any restrictions for using the technology.

This process will allow for the use of an emerging technology that is capable of achieving methane and VOC emission reductions at levels that are at least equivalent to reductions achieved when using OGI or Method 21 for fugitive emissions monitoring. Consistent with section 111(h)(3), the provisions for an alternative means of emissions limitation would require additional rulemaking; it could also require the development of method or monitoring requirements and limitations to ensure accurate and consistent operation of the technology.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 32

Comment: Oil and Natural Gas Production Sites are Unique from Traditional Stationary Sources

The sources covered by the current Subpart OOOO and the proposed Subpart OOOOa, particularly those in the production segment, are unique from typical stationary sources covered by NSPS in that they are small sites, located in remote areas, dispersed from each other (often requiring an hour or more travel time between regulated sites), and typically unmanned. These sites lack the infrastructure of power, communication or even a simply found geographic address that are required to make many of the historic compliance assurance measures function. Because EPA has "force fit" the testing, monitoring, and other compliance assurance requirements designed for traditional stationary sources to the oil and natural gas industry, the proposed testing and monitoring requirements result in unnecessary burden without a commensurate benefit. Sections 12.1.1 through 12.1.3 briefly describe some of the unique aspects of the oil and natural

gas industry. Sections 12.2 and 12.3 provide specific examples of the inappropriateness of these requirements and provide recommendations that will ensure compliance and environmental benefit without creating unnecessary and costly burdens on the industry.

12.1.1 Oil & Gas Production Operating Conditions are not Steady State

Oil and natural gas operations are unique due to the dependence on the naturally occurring underground nature of the resource being harvested. This section summarizes some of those unique characteristics and the impact on emission control devices (primarily combustion control devices).

Unlike most industrial sectors where operating conditions are defined in the engineering stage, the oil and natural gas production sector does not operate at steady state conditions. Equipment design must be tailored to the conditions and fluid compositions supplied by the reservoir. Oil and natural gas is located thousands of feet below the surface and must flow in two or three phases to the surface. Ideally, this flow would occur at a relatively steady rate at a velocity fast enough to suspend small droplets of produced water and liquid hydrocarbons during the vertical ascent to the surface. The mixture is then separated in the two or three phase separator with steady pulses of produced water sent from the bottom of the separator to its storage vessel, hydrocarbon liquids off the middle to its storage vessel, and natural gas off the top of the separator to the gathering system. This may occur at times but it is not typical.

As production declines and velocity in a vertical pipe decrease, the small droplets start to move slower than the gas and combine into larger and larger droplets. These eventually form slugs of liquid that must be pushed up the pipe. The increasing back-pressure on the reservoir reduces in-flow, production, and hence velocity. As backpressure on the reservoir increases and the velocity continues to decrease, the liquid column in the wellbore can stop the gas flow until the gas pressure below the slug increases sufficiently to push the liquid to the surface. The management of these wellbore liquids is a major concern throughout the life of a well that mandates changes in both down hole and surface equipment. The impact to environmental emissions controls is that flow to the control device varies from essentially zero to high flow rates and quickly back to zero rapidly and often. This highly variable, non-steady state flow mandates equipment to be sized much larger than ideal steady state conditions would dictate and makes flow measurement infeasible.

12.1.2 Production Separator Operation

The purpose of the two or three-phase production separator is to separate the two or three-phase flow from the well, to ensure that only natural gas goes to the gathering system and to ensure only liquid hydrocarbons and produced water are sent to their respective storage vessels. Separators are sized to give sufficient “residence time” to allow the separation of phases to take place. Since the actual mix of gas, oil (or condensate), and produced water varies randomly with time, it is impossible to predict when or how often a given control-action will occur.

The flow into the separator is made up of the fluids that the reservoir produces at any given moment, as modified by the transport of those fluids to the surface. The liquid levels in the

separator are maintained by valves (often called dump valves) on the separator outlets to the oil/condensate storage vessel and the produced water storage vessel (although liquid collection systems are sometimes used in lieu of a storage vessel). The dump valves are sized to handle the highest flow rate of liquid that the separator can be expected to receive. Because of the highly variable flow conditions, separators normally provide flow to storage vessels in short spurts, typically lasting only seconds, to maintain the required liquid levels, and dump cycles may be separated by many minutes, hours, or even days.

12.1.3 Closed Vent System Flow Rate

Gas flow from the storage vessel into the closed vent system (CVS) predominantly results from flashing vapors (resulting from the spurts of liquids from the separator) and dwarfs the working and standing emissions typical from storage vessels (that occur between spurts). However, the CVS and control device must be sized sufficiently to handle the peak vapor volumes expected. Measuring the flow in CVS causes two distinct problematic issues. The normal volumes from working and standing losses and the flashing of separator liquids are at very low velocities that are hard to measure with current measurement technology (see Technical Review of Western Climate Initiative Proposals to Meter Fuel and Control Gas, Attachment C). Measuring the flow of flash vapors and peak flow rates would require a device that can go from zero flow to maximum flow in milliseconds and be able to go back to zero just as quickly. The hysteresis (i.e., the amount that the previous state impacts the future state) and the latency (i.e., the time required to return to steady flow after a transient) of the very best commercial measurement devices available today are both inadequate for millisecond-scale transients. Currently for minerals accounting purposes the Federal Government and States do not require flow measurement for liquids but only gaging or strapping of the tank because of the lack of adequate measurement technology.

Response: The EPA appreciates the level of detail provided by the commenter. This has proved helpful as we develop the final standards, and we have taken the commenter's information under consideration.

11.8 Flares

Commenter Name: Bill Thompson, Chairman
Commenter Affiliation: National Tribal Air Association (NTAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6705
Comment Excerpt Number: 9

Comment: The Proposed Rule does little to affect the flaring of methane and VOC emissions. The NTAA understands that the flaring of natural gas, which contains both methane and VOCs, is a common practice in oil and gas exploration, production, and processing operations. However, it wastes natural gas, causes noise pollution based on the volume and velocity of gases going through flare stacks, and contributes to air pollution. Yet, practical options exist to use this natural gas effectively. The natural gas could be used onsite for energy generation; converted into more useful liquids such as methanol; or transported from oil and natural gas facilities via pipelines or fuel trucks.

The NTAA recommends that the Proposed Rule require the owners and operators of oil and natural gas facilities to pursue the aforementioned options as an alternative to flaring, and when circumstances exist that make flaring unavoidable, require owners and operators to substantiate such flaring based on objective criteria as defined by EPA.

Response: The EPA respectfully disagrees that the subpart does not address the practice of combustion to dispose of gas that is associated with production of oil and condensate from the oil and gas sector. The EPA's approach to conservation of gas resources was to compel operators to start to capture gas as close in time to the initiation of flowback, and direct it to a useful purpose, and continue that capture throughout the production, gathering, processing, transmission, and storage chain. The EPA promulgated §60.5375 in subpart OOOO and carried forward similar requirements in §60.5375a for hydraulically fractured and re-fractured wells, directing that sources capture natural gas as soon as technically feasible. In the absence of technical feasibility, operators must document how they concluded that capture was not possible, justifying why they were compelled to flare natural gas for lack of any reasonable alternative.

The EPA also provided opportunities for the use of gas in a process that might otherwise be combusted. Subpart OOOOa defines "route to a process" to mean that "the emissions are conveyed via a closed vent system to any enclosed portion of a process where the emissions are predominantly recycled and/or consumed in the same manner as a material that fulfills the same function in the process and/ or transformed by chemical reaction into materials that are not regulated materials and/or incorporated into a product; and/or recovered." Across affected facilities including vapor recovery units, storage vessels, reciprocating and centrifugal compressors, pumps and valves we created the regulatory framework that routing emissions to a process constituted the BSER for reducing methane and VOC emissions, where possible. (See §§60.5365a, 60.5380a, 60.5385a, 60.5393a, 60.5395a, and 60.5410a.)

Finally, the EPA has added requirements on new well affected facility operators to show due diligence in seeking alternatives to combustion for associated gas. (See §60.5420a(c)(1)(iii)(A)) For operators that have found associated gas that do not have readily accessible gathering

facilities to capture the gas, the operators are obligated to show they have explored how or when such facilities could be made available to capture and use the gas, rather than combust it.

By structuring our regulatory provisions for affected facilities this way, we attempted to make combustion disposal of gas the last option considered. The EPA acknowledges that operators prefer to profit from the resource, but operators have commented that they still need combustion as a legal means to deal with gas that cannot otherwise be captured and used in some way. Lacking an alternative to combustion as the final option, the EPA must continue to allow combustion in some circumstances despite the environmental cost and loss of resources.

Commenter Name: Jonas Kron
Commenter Affiliation: Trillium Asset Management, LLC
Document Control Number: EPA-HQ-OAR-2010-0505-6794
Comment Excerpt Number: 6

Comment: As investors in the industry, and with exposure to the broader markets and the systemic risk of climate change, we believe that oil and gas companies should be incentivized to either capture gas for sale or for a beneficial use on-site. This maximizes efficiencies in the system that will allow the market to function at an optimal level. We believe it would be preferable for the EPA to permit the use of flares only in exceptional situations where it is actually infeasible to capture the gas for sale or on-site use. And when flaring is permitted, the rule should state that operators keep flares as clean as possible.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: David M. Babson
Commenter Affiliation: Union of Concerned Scientists (UCS)
Document Control Number: EPA-HQ-OAR-2010-0505-6858
Comment Excerpt Number: 6

Comment: For a number of processes covered by the proposed standards, operators "must route all saleable quality gas from the separator to a flow line or collection system, re-inject the gas into the well or another well, use the gas as an on-site fuel or use the gas for another useful purpose." Since reinjection or use of methane reduces harmful pollution and avoids waste, it is almost always preferable to flaring. And oil and gas operators can almost always re-inject or use the gas instead of combusting it as long as they properly plan and design their equipment and operations platform to minimize the use of flaring. EPA's proposed combustion allowances for technical infeasibility and salable gas quality are too broad, and would allow for more wasteful flaring than needed. EPA should specify that mitigating methane emissions via combustion shall be permitted only in exceptional situations where it is genuinely infeasible to capture the gas for re-injection, sale or on-site use, and more clearly describe what conditions would need to be satisfied in order to demonstrate a valid need to proceed with flaring.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Interfaith Center on Corporate Responsibility (ICCR)
Commenter Affiliation: Interfaith Center on Corporate Responsibility (ICCR)
Document Control Number: EPA-HQ-OAR-2010-0505-7068
Comment Excerpt Number: 10

Comment: We support the requirement that oil and gas companies use or bring to market captured gas, instead of flaring it. For a number of processes covered by the proposed standards, operators can either capture gas for sale or for a beneficial use on-site, or burn the captured gas in a flare or incinerator. Capturing the gas for sale is generally preferable, since it reduces harmful pollution and avoids waste. In almost all cases, oil and gas companies can utilize the gas instead of flaring, if they properly plan and design their equipment. EPA must specify that the use of flares should be permitted only in exceptional situations where it is genuinely infeasible to capture the gas for sale or on-site use or to use zero-emitting equipment; and EPA must ensure that any flares burn as cleanly as possible. In traveling through the Eagle Ford shale region last June, investors saw numerous flares that were not burning cleanly, and we were concerned about the negative impact on air quality that this engendered.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 4

Comment: And then, of course, for people who live in more rural areas, not necessarily here in D/FW is a big problem, but flaring is a huge problem in other parts of Texas, the Eagle Ford Shale, especially south of San Antonio, and West Texas, too, Cline Shale. The idea that I understand in these rules is that flaring is only restricted or regulated if you're in a nonattainment area, such as D/FW. And flaring will cause more nonattainment areas if it's not restricted and regulated now. So we're not going to solve the problem until we've already allowed it to happen? That also is very counterintuitive, very illogical.

If we're going to have rules to cover air pollution and methane and other toxic emissions from oil and gas, they should cover all of it in all areas of the state not just areas that are already so bad they are violating the Clean Air Act. Why would we allow more and more areas like that to development and go into nonattainment in the first place and then say, okay, now we'll stop the problem of flaring.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 128

Comment: First, it's a valuable product we're wasting. While we're in the process of transitioning our economy off of fossil fuels, for the time being, the honest truth is, we use them and we're using them; and so it makes no sense to allow methane to escape. Instead, it should be captured, sold, and taxed and help our schools and help our state budget. To flare it, or worse, vent it or allow fugitive emissions is not a good option for anybody.

Here in Texas, we appear to be the king of waste. I was looking at the Railroad Commission website the other day, and, you know, they have Rule 32, which says companies that want to flare a well have to get a permit from the Railroad Commission. Fiscal year 2009, 158 permits were issued. Fiscal year 2012, 1,963 permits. Fiscal year 2014, 5,207 permits. Now, most of those obviously were flares, but that's still a wasted product, some of which is escaping into the atmosphere; and those aren't the only permits.

If you're going to flare or vent past a certain amount of time, you have to have a special permit from the Railroad Commission. We have companies -- companies which I consider fairly good companies like Pioneer asking the Railroad Commission to be able to flare for two years -- for over the next two years for multiple wells. That's not a good outcome for anyone.

The Railroad Commission estimates just from these, you know, the estimate is about one percent of our gas overall that we produce is lost through flaring and venting, and obviously as we've heard before in certain counties, it's much, much higher.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 134

Comment: More flaring is not needed in Texas. We would like the rule not to emphasize flaring as an outcome but emphasize capture as the best outcome. Flaring is obviously preferable to

venting, but it's often done incorrectly. Anyone driving down 183 can see it being combusted inaccurately and we don't have the number of inspectors to make sure it's actually happening.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 191

Comment: I think that in addition to that, it would be important for the EPA to look at their current standard of allowing either captured or combustion for methane emissions, allowing operators to either do either, onsite perhaps is not the farthest we could go from a perspective of waste as well as of an environmental perspective. We minimize the flare as much as possible but allow it only if technically feasible or impossible, I guess, would be a step in the right direction.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 198

Comment: Flaring should be allowed only for safety and where no other alternative is available.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 33

Comment: I would like to draw your attention to the Railroad Commission's record on flaring in Texas. They have on their website -- this is not exotic data -- a chart that shows that the percent of gas in Texas that was flared went along at a steady level, has gone along at a steady level for 20 years until about four and a half years ago when it increased.

Now, I think on our record in the state is better than Nigeria and Russia and North Dakota. But all of those places are improving. They are reducing the rate of flaring, and we seem to be going in the wrong direction.

So I would ask you to apply the most stringent possible rules against this waste and pollution and on existing wells as well as new ones.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 63

Comment: Cover flaring everywhere, not just in nonattainment zones because we need to cover the places where fracking is most affluent and not just in the big city areas that never have had attainment.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 89

Comment: Finally, the final rule should encourage oil and gas companies to either use or sell the gas it captures by sealing the leaks, as opposed to burning it off through flaring or in an incinerator.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 87

Comment: And hopefully, we have put an end to flaring. This is the flare at the December 5, 2014 -- at the Clintonville Sportsmen Club for a Utica Shale well. So I would mandate green completions.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337
Comment Excerpt Number: 202

Comment: EPA also needs to ensure that gas flaring is held to an absolute minimum by requiring zero-emission equipment or gas capture wherever that's technologically possible; and where it's not technologically possible, the combustion needs to be as efficient as possible, 95 percent or higher.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 7:55 PM; Public Hearing #1 - Denver, Colorado
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7337
Comment Excerpt Number: 242

Comment: Finally, the proposed rule allows oil and gas companies too much leeway to flare off natural gas instead of capturing it. Flaring wastes valuable natural gas and increases pollution. So EPA should allow flaring only in exceptional circumstances, when it is genuinely not possible to capture the gas for sale or on-site use.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:05 AM - 8:00 PM; Public Hearing #1 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 210

Comment: Operators should be required to use or bring to market captured gas. Flaring should only be allowed in the most extreme circumstances when it is genuinely infeasible to capture the gas for sale or on-site use or to use zero-emitting equipment.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:00 AM - 11:55 AM; Public Hearing #2 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 42

Comment: Third, the EPA's proposed controls should do more to limit flaring.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:00 AM - 11:55 AM; Public Hearing #2 - Pittsburgh, Pennsylvania
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 43

Comment: Third, the EPA's proposed controls should do more to limit flaring.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Tuesday, September 29, 2015; 9:00 AM - 11:55 AM; Public Hearing #2 - Pittsburgh, Pennsylvania
Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2010-0505-7338
Comment Excerpt Number: 50

Comment: EPA should minimize the opportunities for situations in which flaring is an available operation for emissions control, but should demonstrate a strong preference for capturing gas for sale for beneficial use on site and any flaring that is permitted should be required to use state of the art controls.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6705, Excerpt 9.

Commenter Name: Urban Obie O'Brien
Commenter Affiliation: Apache Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6808
Comment Excerpt Number: 17

Comment: §60.5413a: Performance Testing Procedures for Control Devices: Paragraph (e) states that in order to demonstrate continuous compliance for combustion control devices (in this instance, flares) tested by the manufacturer, the equipment must comply with criteria specified in paragraphs (e)(1) through (7).

i. Apache believes the rule must allow operators the flexibility to utilize the most efficient and cost-effective flare technologies available and account for new and innovative technologies coming onto the market. The proposed rule is prescriptive as Paragraph (eX2) requires a pilot flame be present at all times of operation. As written, the rule does not allow for existing auto-ignition technology, which eliminates the need for a continuous flame pilot, reduces fuel usage, and eliminates GHG emissions from a continuous flame pilot. Apache's installations, designed to meet the requirements of Subpart OOOO, currently utilize several types of auto-ignition flare pilot systems, which are not accommodated by the current rulemaking.

ii. Apache recommends that EPA require a single visible emissions test to be conducted no later than 90 days after a new flare begins operations, and following major repairs or replacement of the unit, to ensure it meets the manufacturers' test criteria.

iii. Paragraph (e)(3) requires that a visible emissions test be conducted according to section 111 of EPA Method 22 (appendix A-7) of this part at least once every calendar month. The observation period shall be 15 minutes. This monthly visible emissions testing requirement for each flare places a tremendous operational and paperwork burden on Apache and its wellsite operators as illustrated below. Accordingly, this obligation should be deleted.

iv. Apache recommends that the final rule permit operators to utilize the inspection and maintenance recommendations from the equipment manufacturer in lieu of specific plans for each unit. We also recommend that the rule be modified to contemplate that maintenance and repair activities be recorded in existing logs rather than in newly generated documentation created solely for the purpose of achieving compliance with this section. Paragraph (e)(4)

establishes a requirement that each flare must now have a specific unit inspection and maintenance plan and a maintenance and repair log, all of which must be available for inspection.

EPA has not sufficiently considered the scope of the task involved in conducting monthly visible emissions tests on all combustion control devices (flares). Going forward, it is likely that most, if not all of Apache's new single and multi-well production facilities will require Vapor Recovery Unit (VRU) collection systems, many of which will require flares for emissions control under this Subpart. In 2014, the company added approximately 1,000 new production facilities. In 2015 to date, we added another 750 production facilities, the majority of which utilize VRUs and flares to comply with Subpart OOOO.

To illustrate the time element involved, the observation period for each visible emission test is required to be 15 minutes. VRUs seldom send gas and vapors continuously to a flare (thus the need for auto-ignition systems). Gas is routed to the flare when separator systems transfer hydrocarbon liquids and produced water to the storage tanks, and this rarely takes more than a few minutes to accomplish. Because of this intermittent nature of operation, the VRU and flare systems do not operate when the separator systems are not transferring production fluids. A visible emissions test of an operating flare would take significantly longer than 15 minutes to complete. The observer would have to wait for the separator systems to operate several cycles to actually observe 15 minutes of flare operations. Additional operator time must also be included in the testing program to account for driving from location to location (see Comment 1), report preparation, repairs, maintenance or adjustments, maintaining records and follow-up visual testing after repairs or maintenance are performed. Assuming an operator would need approximately 1.5 hours to conduct visual observations at a single site, complete the associated paperwork, and then travel to the next site, this rule would require 1,125 hours of operator time per month for the first year. That number increases annually as new facilities continue to be brought on line. Assuming an additional 450 sites are added each year, by the end of 5 years, Apache would be conducting 3,750 visual observations per month, or 45,000 visual observations for the year. At approximately 1.5 hour per test, that requires 35 full-time personnel to complete. As previously mentioned, this assumes a growth rate of 750 (500 new and 250 modified) facilities per year. Apache added approximately 1,000 facilities in 2014 (a year of rapid growth) and 750 facilities to date in 2015 (a year of slowed growth with depressed oil prices).

The Agency also fails to recognize that wellsite operators are not continuously present at each wellsite or central battery every day. The wellsite operators drive a specific, optimized route each day to access, inspect, and maintain numerous well sites. It is not unusual for a wellsite operator to visit a specific wellsite only once or twice during a week as many operators do not drive the same route daily. Given the nature of these periodic site visits, it is highly unlikely that a wellsite operator would be at a site on his route that requires a visible emissions test at exactly the same time the separators were unloading fluids to the storage tanks, with a sufficient amount of time to conduct a visual observation. To accommodate the periodic nature of flare operations, to efficiently utilize the wellsite operator's time, and to avoid delays in their route schedules, it would become necessary to utilize dedicated crews for performing visible emissions observations, maintenance, repair, data recording and reporting functions as prescribed in this section. Once the combustion efficiency of the device has been demonstrated and unless

modifications or repairs have been made to the flare, it is unnecessary to perform routine monthly visual emissions test to confirm what has already been established.

Response: As we explained in the Response to Public Comments document for the August 23, 2011 proposed rule (see p. 307 of the document), we maintain our position that without a continuous pilot flame, there may be periods of uncontrolled emissions, and continuous ignition sources are designed to combust the flammable portion of the flowback gas, even if the flowback gas has a low BTU content. We also note that in §60.18(b)(2) of the General Provisions for 40 CFR part 60 rules, a continuous pilot flame is required for flares, and we believe the same requirement is applicable to the combustion control devices typically used for control of emissions from storage vessels and other sources in the oil and natural gas industry. As we stated in the response to comments for the proposed 2011 standards, there is not sufficient data at this time to suggest that electronic ignition systems on combustion devices are capable of continuously supplying a constant source of ignition adequate to keep a flame present on a continuous basis. In addition, for flares, test data for which the current standards in §§63.11(b) and 60.18 were written show that operating a flare with a continuously lit pilot adds an additional degree of flame stability to the flare itself.

We note that the final rule specifies the use of a continuous burning pilot flame. Electronic igniters do not meet this provision. Although an electronic ignition device does not qualify as a continuous burning pilot flame, it may be used, for example, as a means of re-lighting a pilot flame that has been extinguished by wind or other factor, as long as a continuous burning pilot flame is maintained when vapors are being routed to the combustion device.

We disagree with the commenter that performing a visible emissions test only once initially and once following major repairs is enough to ensure the combustion device operates with no visible emissions at all times. Even though a performance test may demonstrate that a device has good combustion efficiency, continued good combustion efficiency is highly dependent on how the control device is operated and maintained. We note that there are very few ongoing compliance requirements to ensure adequate day-to-day operations on these control devices and that visible emissions testing using Method 22 is a quick and easy check for good operation.

We have taken into account the fact that many of these sites are unmanned, remote sites by how we have structured the visible emissions tests. We are allowing the use of Method 22 instead of Method 9. Instead of requiring daily or weekly observations, we are only requiring a visible emissions test once per month. We have also reduced the observation period from the normal one hour or more timeframe to 15 minutes. Finally, recognizing the periodic nature of site visits for operators, we have provided a flexible timeframe for performing the test. While we are requiring a visible emissions test once each calendar month, we are only requiring a 15-day separation between tests. This provides a large degree of flexibility to allow owners and operators to schedule the tests at times when they will be at the site and the flare will be operating.

We are requiring the development of a site-specific monitoring plan for any site that uses a continuous parameter monitoring device. However, we have not prescribed the procedures that must be in this plan. The requirements in this rule do not prohibit a facility from performing any quality assurance/quality control (QA/QC) recommended by a manufacturer, as we agree that it

is often prudent to follow the manufacturer's recommendations. However, we also recognize that each site is unique and that diversity exists among the source category, which is a reason why site-specific monitoring plans are crucial. While a site-specific monitoring plan must incorporate the minimum requirements in the subpart, it allows facilities to determine what additional QA/QC is necessary based upon their own knowledge of their operations and whether the QA/QC should be performed more frequently. There is nothing in the rule that prohibits owners and operators from grouping plans and records together, as long as all required information is included and is available.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 89

Comment: The PBPA commends EPA in choosing to simplify flare compliance requirements by referencing provisions of 40 CFR 60.18, however Subpart OOOOa must allow operators the flexibility to utilize the most efficient and cost-effective pilot technologies available and account for these new and innovative technologies. For example, the EPA has made it clear that a pilot flame is expected to be present and makes no allowance for the use of auto-ignition systems. These auto ignition systems eliminate the need for a continuous flame, and reduce fuel usage and the associated air emissions.

Subpart OOOOa must allow operators the flexibility to utilize the most efficient and cost-effective pilot technologies available and account for these new and innovative technologies.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6808, Excerpt 17.

Commenter Name: William C. Allison
Commenter Affiliation: Colorado Department of Public Health and Environment
Document Control Number: EPA-HQ-OAR-2010-0505-6876
Comment Excerpt Number: 17

Comment: EPA did not propose new requirements for enclosed combustion control devices used to control emissions from affected storage vessels. Therefore, EPA continues to require each enclosed combustion control device install and operate a continuous burning pilot flame. The Division believes that enclosed combustion devices should be equipped with and operate an auto-igniter to ensure continuous operation. Colorado's regulations require all combustion devices used to control emissions of hydrocarbons be equipped with and operate an auto-igniter. The Division had commonly found the pilot light out at combustion control devices, and with little data on the duration of the outage. Therefore, Colorado determined that auto-igniters were a cost-effective method to reduce hydrocarbon emissions, particularly at unmanned sites subject to inclement weather, and adopted the auto-igniter requirement. As stated in previous comments on

EPA's oil and gas NSPS, the Division would support EPA's requirement for automatic electronic spark ignition relighting systems as a means of ensuring that continuous flame pilots remain functional at all times.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6808, Excerpt 17.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 90

Comment: The PBPA requests that flare observations be allowed on a more flexible schedule than those described in 60.18. This is requested because visits to facilities are infrequent and weather conditions may not be favorable to observations at intervals consistent with observation site visits. Additionally it should be noted that when field staff visit facilities the flare is often in stand-by mode and not operating. This would prevent any observation from being made and documented. The PBPA requests that monthly flare inspections be made with no more than 60 days between observations. The PBPA requests that observations be allowed at intervals as close as ten days apart. These observations can be made during times of high use, such as pipeline shut-ins, compressor failures, etc.

Response: The EPA notes that §60.18 does not list a specific schedule for flare observations. We have recognized the periodic nature of site visits for operators by providing a flexible timeframe for performing visible emissions tests. While we are requiring a visible emissions test once each calendar month, we are only requiring a 15-day separation between tests. This allows tests to be separated by up to 45 days. We believe that this provides a sufficiently large degree of flexibility to allow owners and operators to schedule the tests at times when they will be at the site and the flare will be operating.

Commenter Name: Ben Shepperd
Commenter Affiliation: Permian Basin Petroleum Association
Document Control Number: EPA-HQ-OAR-2010-0505-6849
Comment Excerpt Number: 92

Comment: Flare observations should be allowed on a more flexible schedule than those described in 40 CFR 60.18.

Monthly flare inspections should be made with no more than 60 days between observations, and these observations should be allowed at intervals as close as ten days apart.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6849, Excerpt 90.

Commenter Name: David M. Babson
Commenter Affiliation: Union of Concerned Scientists (UCS)
Document Control Number: EPA-HQ-OAR-2010-0505-6858
Comment Excerpt Number: 7

Comment: Finally, EPA must ensure that combustion control devices (i.e. flares and enclosed combustion control devises) burn as cleanly as possible by finalizing standards establishing strict methane destruction efficiency requirements for such devices. Although EPA identified reduced emissions completion (REC), combustion (e.g. flaring), and the combination of REC with combustion as options for reducing methane emissions from various oil and gas operations (particularly hydraulically fractured well completions), EPA's proposal did not establish adequate performance metrics for these options. Without additional performance requirements, EPA cannot quantify whether its estimated emissions controls for REC, flaring, and REC plus flaring are being met or exceeded.

Quantifying the destruction efficiency of combustion control devices is critical to assessing the overall methane emissions at oil and gas extraction sites that are operating flares. Given the relative potency of methane, a deviation in the destruction efficiency of as little as 1% can alter the equivalent GHG emissions profile by as much or more than 10%. Therefore, EPA should finalize data monitoring and reporting requirements sufficient to quantify the effective methane destruction efficiency of combustion control devices at reasonable intervals, and require reporting of deviations from expected destruction efficiencies occurring while such flares are in operation.

Response: The EPA disagrees that the proposed rule (and the final rule) have insufficient compliance demonstration procedures. In general, the final rule requires 95 percent destruction efficiency of VOC and methane emissions. The final rule includes thorough and comprehensive initial and continuous compliance requirements to assure that the standards are achieved. These requirements have been used in a number of other rules prior to their inclusion in subpart OOOOa, and we believe they have proven to be very successful in determining proper control device performance.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 38

Comment: EPA Must Revise The Provisions Related To Flares Subject To §60.18

API has several issues with the requirements in Subpart OOOO and proposed Subpart OOOOa that are related to the requirement that flares used as control devices meet §60.18 of the general provisions. One these issues, which is addressed in Section 12.5.2, is related to the inadequacy of

the requirements related to flares for storage vessel affected facilities. There are also many technical challenges that make is infeasible to comply with the §60.18 provisions that occur both at production sites and natural gas processing plants. These issues, along with recommended regulatory changes, are discussed in sections 12.5.2 through 12.5.6.

12.5.1 The Proposed Requirements For Flares Are Inconsistent And Inadequate, Particularly As They Apply To Storage Vessel Affected Facilities

The proposed regulatory compliance requirements, with respect to flares and their conformance to §60.18 of the General Provisions of 40 CFR part 60, are reasonably clear for centrifugal compressor affected facilities. The construction of those requirements in Subpart OOOO both generally results in adoption of §60.18(b) requirements for flares yet innovatively allows flexibility to adopt new or superior flare technologies through performance testing. However, this is not true for storage vessel affected facilities. Clarity for applicable requirements, with respect to flares and their conformance to §60.18, for storage vessel affected facilities could be accomplished in a similar manner. For example, §60.5412(a)(3) of Subpart OOOO clearly identifies a flare designed and operated in accordance with the requirements of §60.5413(a)(1) as an acceptable control device for centrifugal compressors affected facilities. However, there is no analogous allowance of the use of a flare as an acceptable control option in §60.5412(d) for storage vessel affected facilities. An addition to §60.5412(d) of a requirement, similar to §60.5412(a)(3), specifying that a flare must be designed and operated in accordance with the requirements of §60.5413 would result in the same clarity for storage vessel affected facilities. An additional sentence could be added to the introductory paragraph in §60.5413 to say that the performance test exemptions for flares in §60.5413(a)(1) are applicable to both storage vessel and centrifugal compressor affected facilities. The change recommended above to the introduction to §60.5413 is necessary without regard to the flare provisions as the requirements in §60.5413(d) and (e) for manufacturer tested devices also apply to storage vessel affected facilities.

Similarly, for Subpart OOOOa, an addition to §60.5412a(d) of a requirement, similar to §60.5412a(a)(3), specifying that a flare must be designed and operated in accordance with the requirements of §60.5413a would carry the clarity for storage vessel affected facilities to Subpart OOOOa. An additional sentence in the introductory paragraph in §60.5413a is unnecessary because it includes applicability to centrifugal compressor affected facility, pneumatic pump affected facility, and storage vessel affected facility as proposed.

These changes would result in clear and appropriate requirements for flares used as control devices for storage vessel affected facilities. Specific recommendations for these amendments are provided in Section 12.5.6.

While the recommendations above will provide clarity that flares are acceptable control devices for storage vessel affected facilities, as well as clarify the requirements of these flares, there are numerous issues associated with the broad application of the provisions of §60.18 to flares to Subpart OOOO and OOOOa affected facilities. These issues are discussed in the following sections. Additional regulatory recommendations are provided to rectify these problems and allow the continued use of flares in the oil and natural gas industry.

12.5.2 There are Technical Challenges in Meeting the §60.18 for Flares in Oil and Natural Gas Production and Gas Processing that Must be Addressed

Flares are an attractive control device choice for the oil and natural gas industry due to their simplicity, reliability, lower maintenance requirements, and effectiveness in reducing organic compound emissions. The requirements in §60.18 of the 40 CFR part 60 General Provisions were developed by EPA to generally apply to flares. However, these requirements were developed and refined based on industrial flares primarily used at large petroleum refineries and petrochemical plants. As discussed above in section 12.1, there are unique aspects of the oil and natural gas industry that require accommodations in the control device requirements. The following sections suggest changes related to the application of the §60.18 provisions to Subpart OOOO and OOOOa affected facilities that will allow the compliant use of flares in the oil and natural gas industry without compromising their effectiveness in reducing VOC and methane emissions.

12.5.3 The Use Of Electronic Ignition Systems Should Be Allowed

§60.18(c)(2) requires that flares be operated with a flame present at all times, as determined by monitoring using a thermocouple or any other equivalent device to detect the presence of a flame. API continues to believe that an option to use electronic ignition systems should be allowed for the oil and natural gas sector. Since oil and natural gas operations are not always steady state, flares with continuously lit pilots (24/7) can unnecessarily burn and waste fuel gas for the pilot while causing unnecessary emissions when there is otherwise no emission stream being burned. An attractive and effective alternative is to allow the use of electronic ignition systems that ensure a flame is present whenever emissions are being routed to the flare.

In addition, many oil and natural gas production sites are remote and unmanned. In these situations, an electronic ignition system has proven to be a more reliable means of ensuring there is always a flame when emissions are routed to the flare rather than attempting to maintain a continuous pilot.

In the Natural Gas STAR program, EPA published a Partner Recognized Opportunity (PRO) in PRO Fact Sheet No. 903. Presumably this was published because EPA approves of the design, recognizes its benefits and wanted to promote its use in industry. EPA should not forfeit the benefits of this control technology enhancement by disallowing its use. As an established and preferred technology by EPA in the Natural Gas STAR program, operators should not have to petition EPA for approval.

API recognizes the need to ensure that the electronic ignition system is working and that a flame is present at all times when emissions are being routed to the flare. API believes that the existing requirements in §60.18(f)(2) already provides an appropriate requirement: Paragraph (e) states that "Flares used to comply with provisions of this Subpart shall be operated at all times when emissions may be vented to them" and (f)(2) states "The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame." With the simple amendments to §60.5413(a) and §60.5413a(a) and §60.5417(d)(1) and

§60.5417a(d)(1) shown below, EPA can allow the use of auto-ignition devices while also ensuring compliance.

Specific recommendations for these amendments are provided in Section 12.5.6

12.5.4 Testing Should Not Be Required To Demonstrate Compliance With §60.18(f)(4)

Paragraph 60.18(f)(4) requires that the volumetric flow rate be "*determined by Reference Methods 2, 2A, 2C, or 2D as appropriate*". As a result, a test will be required for every flare used to comply with Subparts OOOO and OOOOa. As discussed in section 11.1, the measurement of flow is impractical and potentially impossible at oil and natural gas production sites. In addition, even if these technical challenges were ignored, EPA's estimate of impacts did not include significant costs that would be incurred by the industry.

While not specifically referenced in this paragraph, the provisions in §60.8(c) require that performance tests be conducted on conditions that reflect "*representative performance of the affected facility*." During representative conditions, the exit velocities of the flare at oil and natural gas sites will never approach 400 feet per second. This can be easily demonstrated through the use of engineering calculations rather than testing or direct measurements. Specific changes must be made to §60.5413(a) and §60.5413a(a) to correct this situation. The recommendations for these amendments are provided in Section 12.5.6

The technical challenges related to volumetric flow rate are not unique to storage vessels in the production segment. At many gas processing plants, pressure release devices are often routed to flares along with the emissions from other equipment. While there are typically no emissions from these pressure release devices, they can develop leaks. Under Subparts OOOO and OOOOa, these pressure relief devices are subject to §60.482-4a(a) of NSPS Subpart VVa. Since these pressure release devices are routed to a "closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device", they are exempt from the leak detection and repair (LDAR) requirements in §60.482-4a(a) and (b), but are subject to the closed vent system and control device requirements of §60.482-10a. Paragraph §60.482-10a(d) requires flares to comply with §60.18. The leaks that would occur from these pressure release devices would be very low, meaning that the difficulties in measuring the flow to these flares results in costly test programs that are entirely unnecessary given the extremely low flow rates. Therefore, API also recommends that the volumetric flow rate for these flares also be allowed to be determined using engineering calculations. API suggests that paragraphs be added to §60.5401 and §60.5401a to address this technical infeasibility situation. These recommendations for these amendments are provided in Section 12.5.6.

12.5.5 Sonic And Other Flares Operated During Maintenance, Startup, Shutdown, And Malfunction Situations Should Not Be Required To Comply With The Exit Velocity Requirements In §60.18(c)(4)

In EPA's September 18, 2015 Federal Register Notice (80 FR 56646), EPA specifically requested comment on the use of pressure-assisted flares in the oil and natural gas industry.

As EPA notes, pressure-assisted, or sonic, flares are designed to exceed §60.18's maximum exit velocity of 400 feet per second. As a result, they do not meet §60.18. Some facilities with potential large volume flows may utilize sonic flares, such as those included at onshore natural gas processing facilities, to control emissions in times of emergency, upsets, or maintenance. Sonic flares offer advantages over traditional low-pressure flares in some applications. For example, some designs allow smokeless operation over the entire operating range without any assist medium. This is a clear benefit for remote areas. Additionally, with no assist medium, energy usage and its related emissions are minimized and there remains no potential for steam/air over-assist. Some designs also offer less low frequency noise and less flame visibility in low profile designs. Sonic flares operate with destruction efficiencies that are at least as equivalent to, and generally greater, than low pressure flares.

Pressure-assisted (sonic) flares are not designed for continuous use, but instead operate in emergency, upset or maintenance situations where high volumes and pressures are sent to the flare. In some scenarios, pressure relief valves subject to LDAR monitoring are routed to sonic flares for the purpose of emergencies or upsets. Maintenance events are also routed to these flares in some cases.

However, a conflict with the velocity limits in §60.18(c)(3) is not limited to the case of pressure-assisted flares. Velocity limits for commonly used low-pressure flares (ground or elevated steam-assisted, air-assisted or unassisted flares) are achievable under representative day-to-day conditions. However, velocity limits for even low-pressure flares can be exceeded under conditions that approach the hydraulic capacity of flares. General application of §60.18(b) to a Subpart without the inclusion of §60.11 or an alternative exemption for periods of emergency, upset or maintenance is problematic.

Flares designed under §60.18(b) may exceed velocity limits during periods of emergency, upset or maintenance. In order to remain in compliance with the velocity limits, flare operators would need to install additional flare capacity for SSM events either by replacing an existing flare or adding additional flares. Therefore, the exemption from the §60.18 maximum velocity requirements should not be limited to pressure-assisted flares, but rather to all flares during periods of emergency, upset, or maintenance. As discussed in section 12.5.7 below, there is substantial evidence that indicates that the performance of flares will be maintained at these higher velocities.

Therefore, in order to allow the use of sonic flares and traditional flares designed under §60.18(b) for the oil and natural gas industry, EPA should exempt flares from the maximum velocity requirements in §60.18(c)(4).

Revisions are needed to §60.5413(a) and §60.5413a(a), and to §60.5401 and §60.5401a to allow the use of flares in these situations. The recommendations for these amendments are provided in Section 12.5.6.

In addition, changes are needed to Table 3 of both Subparts OOOO and OOOOa. The recommendations for these amendments are provided in Section 12.5.6

12.5.6 Recommended Rule Changes To Address Issues With Flare Requirements

The following are the recommended rule changes related to the issues discussed above that are related to the requirement that flares used for Subparts OOOO and OOOOa comply with the requirements of §60.18.

Subpart OOOO

§60.5401

(h) For a flare that is subject to §60.18 via §60.482-10a(d), the volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the process unit. In addition, the velocity limits in §60.18(c)(3) do not apply during periods of emergency, upset, or maintenance.

§60.5412

(d) Each control device used to meet the emission reduction standard in §60.5395(d) for your storage vessel affected facility must be installed according to paragraphs (d)(1) through (3) of this section, as applicable, and (d)(4). As an alternative to paragraph (d)(1) of this section, you may install a control device model tested under §60.5413(d), which meets the criteria in §60.5413(d)(11) and §60.5413(e).
*****

(3) You must design and operate a flare in accordance with the requirements of §60.5413.

(~~3~~4) You must operate each control device used to comply with this subpart at all times when gases, vapors, and fumes from working or flash losses are vented from the storage vessel affected facility through the closed vent system to the control device. You may vent more than one affected facility to a control device used to comply with this subpart.

§60.5413

This section applies to the performance testing of control devices used to demonstrate compliance with the emissions standards for your centrifugal compressor and storage vessel affected facility. You must demonstrate that a control device achieves the performance requirements of §60.5412(a) using the performance test methods and procedures specified in this section. For condensers, you may use a design analysis as specified in paragraph (c) of this section in lieu of complying with paragraph (b) of this section. In addition, this section contains the requirements for enclosed combustion device performance tests conducted by the manufacturer applicable to both storage vessel and centrifugal compressor affected facilities.

(a) *Performance test exemptions.* You are exempt from the requirements to conduct performance tests and design analyses if you use any of the control devices described in paragraphs (a)(1) through (7) of this section.

(1) A flare that is designed and operated in accordance with §60.18(b), with the exceptions noted in paragraphs (a)(1)(i) through (iii) of this section. You must conduct the compliance determination using Method 22 at 40 CFR part 60, appendix A-7, to determine visible emissions.

(i) A flare that is equipped with an electronic ignition system will satisfy the requirements in §60.18(c)(2) and (e),

(ii) The volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the centrifugal compressor, pneumatic pump, or storage vessel affected facility, and

(iii) During periods of emergency, upset, or maintenance, the velocity limits in §60.18(c)(3) do not apply.

§60.5417(d)(1)

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the ~~continuous ignition of the pilot flame~~ presence of a flame as required in §60.5412(d)(4).

[in table 3 to Subpart OOOO of Part 60 - Applicability of General Provisions to Subpart OOOO, a line that reads;

§ 60.18 ; General control device and work practice requirements ; Yes ; Except that (1) A flare that is equipped with an electronic ignition system will satisfy the requirements in §60.18(c)(2). (2) The volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the centrifugal compressor, pneumatic pump, or storage vessel affected facility. (3) During periods of emergency, upset, or maintenance, the velocity limits in §60.18(c)(3) do not apply.]

Subpart OOOOa

§60.5401a

(h) For a flare that is subject to §60.18 via §60.482-10a(d), the volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the process unit. In addition, the velocity limits in §60.18(c)(3) do not apply during periods of emergency, upset, or maintenance.

§60.5412a

(d) Each control device used to meet the emission reduction standard in §60.5395a(a) for your storage vessel affected facility must be installed according to paragraphs (d)(1) through (3) of this section, as applicable, and (d)(4). As an alternative to paragraph (d)(1) of this section, you may install a control device model tested under §60.5413a(d), which meets the criteria in §60.5413a(d)(11) and §60.5413a(e).
*****

(3) You must design and operate a flare in accordance with the requirements of §60.5413a.

(~~3~~4) You must operate each control device used to comply with this subpart at all times when gases, vapors, and fumes from working or flash losses are vented from the storage vessel affected facility through the closed vent system to the control device. You may vent more than one affected facility to a control device used to comply with this subpart.

§60.5413a(a)

(1) A flare that is designed and operated in accordance with §60.18(b), with the exceptions noted in paragraphs (a)(1)(i) through (iii) of this section. You must conduct the compliance determination using Method 22 of appendix A-7 of this part to determine visible emissions.

(i) A flare that is equipped with an electronic ignition system will satisfy the requirements in §60.18(c)(2) and (e),

(ii) The volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the centrifugal compressor, pneumatic pump, or storage vessel affected facility, and (iii) During periods of emergency, upset, or maintenance, the velocity limits in §60.18(c)(3) do not apply.

§60.5417a(d)(1)

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the ~~continuous ignition of the pilot flame~~ presence of a flame as required in §60.5412(d)(4).

[in table 3 to Subpart OOOOa of Part 60 - Applicability of General Provisions to Subpart OOOOa, a line that reads;

§ 60.18; General control device and work practice requirements ; Yes ; Except that (1) A flare that is equipped with an electronic ignition system will satisfy the requirements in §60.18(c)(2). (2) The volumetric flowrate used to calculate the actual exit velocity in §60.18(f)(4) may be determined using engineering calculations based on conditions that reflect representative performance of the centrifugal compressor, pneumatic pump, or storage vessel affected facility.

(3) During periods of emergency, upset, or maintenance, the velocity limits in §60.18(c)(3) do not apply.]

Response: Concerning the portion of the comment related to auto-ignition devices, see response to DCN EPA-HQ-OAR-2010-0505-6808, Excerpt 17. Concerning the portion of the comment related to sonic flares, see response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.

The EPA agrees with the commenter on the ambiguity in regards to the requirements for flares used to control storage vessel emissions. We have revised the final rule to make our intent clear that flares are an acceptable control options under §60.5412(d) and §60.5412a(d) and to add applicable performance requirements for these flares.

We are not providing an exemption for low-pressure flares to operate outside of the requirements of §60.18 during malfunction events. The restrictions in §60.18 ensure that the flare will achieve the desired destruction efficiency. The standard for destruction efficiency applies at all times, even during startup, shutdown, and malfunction. Allowing an exemption during these times provides no compliance assurance that the standard is achieved.

We disagree that a performance test for flares is unnecessary or burdensome. The performance test ensures that the flare maintains a high destruction efficiency. Determining volumetric flowrate is a simple demonstration. While we acknowledge that engineering calculations can be a valuable tool for demonstrating compliance, actual measurements are necessary to demonstrate the accuracy of the engineering calculations. Actual measurements are also a useful tool for correlating and adjusting engineering calculations.

We do not believe that there is a technical infeasibility issue in measuring the gas flow to the flare. While we believe that there will be a high enough flow to the flares to easily measure the flow as the performance test should only be performed at representative conditions, we note that the EPA flow methods are capable of handling low, intermittent and non-steady flow conditions.

Finally, we note that the commenter previously stated that the EPA was incentivizing flare use by requiring measurement of gas flow on enclosed combustion devices, even though an enclosed combustor "yields higher destruction efficiencies than flares". The commenter further stated, "It is counterproductive for the environment to disadvantage enclosed combustors". While the EPA is not requiring a particular control device in Subpart OOOOa, in light of the commenters previous statement about not disadvantaging enclosed combustors, we do not believe that it is prudent to remove compliance demonstrations from flares when enclosed combustors are subject to such a requirement. All control devices should perform a demonstration that they are capable of achieving what they are required to achieve.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 39

Comment: Velocity Limits In §60.18(C)(3) Are Unnecessary To Ensure High Destruction Efficiency In Flares

There is substantial evidence that flares operating with higher exit velocities are effective in reducing emissions. Following is a discussion of this evidence.

Origins of Existing Flare Velocity Limits. The velocity limits in 40 CFR 60.18 were originally promulgated on January 21, 1986 and are graphically depicted below. [Figure 12-1 Current EPA Flare Velocity Limits] The figure shows flame exit velocities in feet-per-second (fps) along the x-axis and lower heating value of the waste gas in Btu/scf along the y-axis. A minimum heat content is required of 200 Btu/scf for unassisted flares or 300 Btu/scf for assisted flares up to 60 fps, where the required heat content increases as a function of exit velocity until a maximum allowable velocity of 400 fps is reached.

This relationship was developed following a series of EPA sponsored tests conducted in the 1980's that examined how various flare operating parameters, including velocity, affect flare performance. The tests with relevance to the current velocity requirements are the 1983 McDaniel test and the 1984 Pohl test. The focus of the 1985 Pohl and 1986 Pohl studies was not on high velocity, but any test runs from these studies where the exit velocity of the flare was greater than 60 feet per second (fps) have been included in this analysis.

The 1986 limits appear to originate with only four data points from these tests – the average value at the upper limits of each study. The 60 fps, 300 Btu/scf limit for steam-assisted flares was set based on a single data point --McDaniel 1983 test 57. The 200 Btu/scf limit for unassisted flares was also set based on a single data point – McDaniel test 59. These tests were performed on an 8.6-inch steam-assisted flare fueled with a propylene/nitrogen mix. The data are shown in Figure 12-3 [Figure 12-2 - A comparison of Combustion Efficiency vs Velocity for McDaniel 1983]. The data are binned by heat content, where red dots indicate test runs whose combustion zone net heating value (NHVVG) is less than 270 Btu/scf, green dots indicate test runs with NHVVG between 270 and 500 Btu/scf, and blue indicate test runs with NHVVG greater than 500 Btu/scf.

McDaniel did not collect data at velocities higher than 60 fps. At the 60 fps upper limit of the data, combustion efficiency remained very high and with no evidence of a trend toward lower combustion efficiency. These data were used to establish the 60 fps velocity limit although there is no evidence that operating at higher velocities results in degraded combustion efficiency.

The 400 fps, 1,000 Btu/scf limit appears to be set based on two data points from flame stability test runs 99 and 104 from Pohl 1984. That study was performed on a 3-inch steam assisted flare fueled with a propane/nitrogen mix. These data are shown in Figure 12-3. The data are binned by heat content, where green dots indicate test runs with combustion zone net heating value (NHVCZ) between 270 and 500 Btu/scf and blue indicate test runs with NHVCZ greater than 500 Btu/scf.

Similarly to the data used to establish the 60 fps limit, data collected in this study were not collected at velocities higher than the upper limit of 400 fps. As in McDaniel 83, Pohl 84 showed

no evidence of a trend towards lower combustion efficiency at the upper velocity limit measured. These data were used to establish the 400 fps limit although there is no evidence that operating at higher velocities results in degraded combustion efficiency.

High Velocity Flare Test Data Figure 12-4 [Figure 12-4 - A Comparison of Combustion Efficiency vs Velocity for All Publically Available High Velocity Flare Tests binned by NHVCZ Range CE vs. Velocity] shows all data from publically available high velocity flare tests as of October 2014. Some low velocity data are also included to the extent that they were measured during a test series including high velocity data. Data includes the 1980's flare studies referenced above as well as more recent studies (Marathon Garyville and Dow). This data is similarly displayed based upon combustion efficiency (CE) as a function of exit velocity in fps. The data is binned by NHVCZ in groups of 500 Btu/scf. Only data with NHVCZ > 270 are included.

Almost all of the low velocity data that also have low CE have NHVCZ values less than 500 Btu/scf. Additionally, virtually all of the test runs with velocity greater than the current limit of 400 fps, were conducted at NHVCZ values less than the current 1,000 Btu/scf limit. This graph clearly shows that high combustion efficiency above the current limits is not only possible, but that it is assured based upon available test data.

Flame Stability. The claim is often made that the reason velocity limits are necessary is to ensure "flame stability." However, flame stability has been defined differently in different studies. McDaniel did not address flame stability. Pohl defines flame stability as:

"The term *flame stability* simply means that a flame is maintained; flame instability occurs when the jet velocity exceeds the flame velocity and the flame goes out."

Others have defined flame stability in terms of "lift-off", a conditions that occurs when the base of the flame detaches from the flare tip.

While there is no doubt that Pohl's definition results in unacceptable flare performance, there is little evidence that flame lift-off has any correlation either positive or negative to combustion efficiency. Figure 12-5 [Figure 12-5 - A Comparison of Flame Lift-Off and Combustion Efficiency from Pohl 84] shows every data point from Pohl 84 where flame lift-off was noted in the report.

Twenty-seven of the 32 lifted flames showed high combustion efficiency. None of the remaining five points had measured combustion efficiency below 91%. Figure 12-5 clearly shows that flame lift-off does not affect combustion efficiency over a wide range of velocities and net heating values.

Concern over flame lift-off affecting combustion efficiency is not supported by the data. The only definition of flame stability with relevance to velocity limits is Pohl's definition that a high velocity flame is stable until it goes out.

There is also no evidence of a gradual decline of combustion efficiency when approaching the point where the flame is extinguished or the "snuff point." Both the Pohl 84 data and the

Marathon Garyville data were collected as near as possible to the snuff point while still maintaining a flame. No evidence of degraded combustion efficiency was noted.

Conclusion. Current flare velocity limits restrict flare operation above 60 fps and prohibit operation entirely above 400 fps. This paper reviewed data from the data sets used to establish those federal regulatory velocity limits as well as recent high velocity flare test results.

All of the data collected, including the data used previously to set current limits as well as recently collected data, show that high velocity flaring results in high flare combustion efficiency (>96.5%). Previous limits were based solely on lack of data at higher flare exit velocities. There is no indication either in the 1980's studies or the more recent flare studies that high velocity flaring contributes to poor combustion efficiency.

The data on high velocity flaring is consistent with combustion theory, which shows that high velocity flames result in better air entrainment and mixing and so result in higher combustion efficiency. Limits on high velocity flaring are unnecessary and, in fact, counter-productive.

Response: The EPA disagrees with the commenter. While we agree that the data from the 1983 McDaniel and 1984 Pohl tests did not conclusively show that at higher velocities combustion efficiency will degrade, the tests did not conclusively show that combustion efficiency will remain the same or increase at higher velocities either. Combustion theory states that combustion is highly dependent on three principles-time, temperature and turbulence. While increasing velocity can certainly increase turbulence, it has the counter effect of decreasing the residence time, or the time in the flame zone. A fine balance of these principles must be maintained in order for combustion efficiency to remain high. A flare has the added difficulty of actually being able to maintain its flame if the gas flow gets high enough to overwhelm the flame.

We note that the additional studies pointed to by the commenter from Marathon Garyville and Dow include data from pressure-assisted ground flares. We do recognize that pressure-assisted flares have specially-designed flare tips capable of achieving high combustion efficiencies at high flare tip velocities and are in the process of reviewing alternative operating parameters for such installations on a site specific basis. The data in these studies also included tests on a steam-assisted flare tip. While this data is interesting, the testing only involved one type of steam-assisted burner. Additionally, we note that most flares in this sector are either unassisted or air assisted. We have no data showing that the same correlation demonstrated for steam-assisted flares holds true for air-assisted or unassisted flares. Because we have no data to the contrary, we continue to believe that the requirements in the General Provisions should still apply to standard low-velocity flares, as we know that these requirements will provide high destruction efficiencies for these flares.

At high velocities, flare flame lift-off can occur leading to reduced combustion efficiencies and potentially complete loss of flame. Additionally, the flare tip velocity limits ensure that facilities operate their flares within a stable operating regime. The commenter provided no data to suggest that high flare combustion efficiencies are achievable for traditional, elevated flare tips at velocities beyond those allowed by the General Provisions. The EPA conducted an extensive review of flare data and concluded that velocity is a contributor to flame lift off and that flame

lift off can lead to flame instability. Our conclusions are documented in "Parameters for Properly Designed and Operated Flares" available at: https://www3.epa.gov/airtoxics/flare/2012flaretechreport.pdf.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 39

Comment: EPA is proposing to remove the provision in Subpart OOOO Table 3 that exempts flares from having to comply with the requirements for the design and operation of flares set forth in 40 CFR § 60.18. TPA opposes this proposal because it would be counter-productive. Among the flares used in the oil and gas industry are pressure-assisted flares, also known as sonic flares. These flares operate at a very high velocity and as a result, they have enhanced destructive qualities, meaning that they have increased effectiveness at controlling pollutant emissions. The problem with EPA's proposal is that sonic flares could not meet the velocity requirements in 40 CFR § 60.18. If EPA eliminates the exemption currently provided in Table 3, high-efficiency sonic flares will no longer be able to be used as a control device.

Rules that are intended to enhance emission controls should not contain a requirement that would have the opposite effect. EPA should allow owners and operators to continue to use highly effective sonic flares by retaining the current provision in Table 3 that exempts flares from the design and operational requirements in 40 CFR § 60.18.

Response: The EPA disagrees that operating at a high velocity results in enhanced destruction efficiency. To the contrary, operating at a high velocity can result in a lower destruction efficiency, depending on how the flare is operated and the type and amount of assist media. However, we note that sonic flares are different from standard, low-velocity flares. See response to DCN EPA-HQ-OAR-2010-0505-6846, Excerpt 1.
